

Magnesium (Mg) Check-up

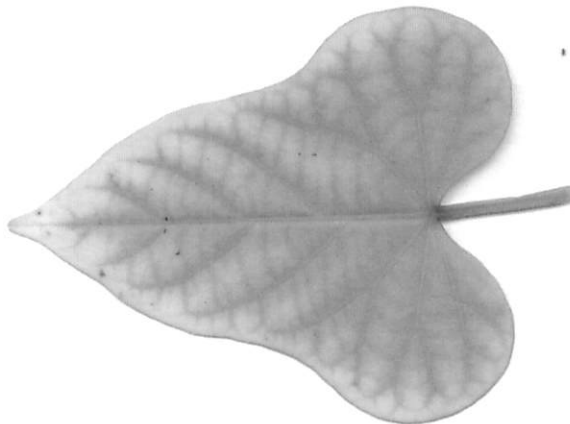
Brian E. Whipker and James L. Gibson

North Carolina is blessed with high quality water that contains little alkalinity or excessive nutrients. This makes nutrient management easier for many greenhouses as long as a balanced approach is used.

One macroelement required by plants that may be overlooked is magnesium (Mg). In the late spring of 2002, Mg deficiencies were observed in a number of greenhouses. One possible reason why Mg deficiencies were more numerous was because the irrigation frequency increased with the warmer spring, which lead to the leaching of the magnesium supplied

from the lime charge. In addition, late in the season Mg additions were not made to the 20-10-20 fertilizer.

What does Mg deficiency look like? It develops on the older leaves as an interveinal chlorosis. A marginal leaf necrosis occurs with advanced symptoms. (Iron deficiency, typically induced by high pH, also is an interveinal chlorosis, but occurs on the younger leaves.)



What can be done? Make sure your fertilizer contains Mg. A constant fertilization rate of 25 ppm Mg is a good starting point or a monthly application of 1 pound epsom salts (magnesium sulfate) per 100 gallons of water. Also, because potassium (K), calcium (Ca) and Mg can have antagonisms if one of

them is supplied in excess, try to maintain a 4 K : 2 Ca : 1 Mg ratio.