



NEWS AS IT HAPPENS

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From the Bottom to the Top

Anyone who has ever been to the circus knows just how crucial balance is to a tightrope walker high above the center ring. And though the settings may be different, balance is also critical when it comes to making plants grow and thrive.

A common example of this is the constant battle waged by Green Industry professionals to correct Calcium (Ca) and Magnesium (Mg) nutrient deficiencies that occur in plants (most often at the 2-to-1-ratio). For example, in situations where the calcium to magnesium ratio is extremely unbalanced, there are visible aberrations in the soil structure (i.e. walnut-sized chunks of soil and excessive water percolation).

This situation is one where it is critical to work from the bottom (at root level) up. On base saturation, the calcium-to-magnesium levels in the soil should optimally be at a 7 to 2 ratio. This is a maintenance (not a corrective) practice.

There is also the issue of pH to consider. When magnesium and calcium are in a 7 to 2 ratio, the pH is usually correct. Excessive or deficient levels of either nutrient change the pH, which in turn will "lock up" other nutrients (making them unavailable to the plant).

It is absolutely necessary to correct any calcium and magnesium levels in your soil. This process, however, will take some time. In the mean

time, it is possible to gain almost immediate corrections in your plants via foliar applications.

If you are looking for a great foliar (immediate) material for your plants, a CHELATED 2-to-1 calcium-to-magnesium ratio product is ideal, since it is common for plants to be deficient at these levels. Chelation is crucial, since it is this process that makes nutrients AVAILABLE for use by the plant. In the greenhouse and nursery industries, achieving a 2-to-1 Ca to Mg ratio can more or less be classified as "corrective."

When dealing with turfgrass, ornamental, and landscape situations, however, a 2-to-1-ratio material is more or less a "maintenance" tool. These types of plants usually have a higher calcium requirement (especially during the summer). While it is corrective on plants that are 2-1 deficient, it is more often than not used to gently nudge the calcium and magnesium ratio toward proper levels.

Symptoms of calcium and magnesium deficient plants are immature development and deformity of the plant.

Calcium deficiencies most often occur in the youngest/newest growth of a plant. The leaves and new tissue of the plant will curl, twist, and eventually fall off.

When a plant is deficient in magnesium, it is the older, more established leaves that are first affected. The

plant will become chlorotic, with the leaves changing color beginning as a reddish brown and changing over to yellow. The end result is that the leaves curl and eventually drop off of the plant.

To get your initial corrections going, a chelated source of Calcium and Magnesium (like Growth Products' Cal-Mag Max) will provide your plants with almost immediate correction.

Cal-Mag Max (7-0-2) is great for foliar application with all classes of plants (including trees, shrubs, plants, turfgrass, etc.). Foliar applications correct deficiencies in turfgrass blades (turf only).

As effective as foliar applications are, you will eventually have to correct the calcium and magnesium ratios in your soils. Heavier rates will be necessary, and it will take time to accomplish.

To learn more about any of the products in the Growth Products Line, call us at (800) 648-7626. You may also visit us on the World Wide Web at www.growthproducts.com. E-mail: questions@growthproducts.com. Faxes may be sent to (914) 428-2780.