

Magnesium Deficiency in Cut Flower Chrysanthemums

Magnesium deficiency in cut flower chrysanthemums is presently under investigation in San Mateo County. Symptoms are an interveinal chlorosis with the loss of green color particularly apparent in the margins of the leaves. With mild cases the symptoms will show mainly in the lower leaves. However, under severe conditions all of the foliage can be affected.

In one particular planting with the variety Albacross, the evidence points to magnesium deficiency induced by large potassium applications. Soil analysis

shows that potassium is high and the potassium/magnesium ratio is in the range where magnesium deficiency can result.

The real "clincher" is found in the results of tissue analysis which are as follows:

Stage of Growth	Magnesium (percent)	Potassium (percent)
8 weeks before bloom, no symptoms	0.10	4.8
21 days before bloom, mild symptoms	0.06	6.0
7-10 days before bloom, strong symptoms	0.04	5.3

* Normal magnesium in the foliage is around 0.2 to 0.3 percent. Thus, even the better looking leaves at this location were on the verge of showing symptoms.

Potassium levels in the leaves and soil were high. High potassium levels in soil can interfere with the uptake of magnesium resulting in magnesium deficiency.

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