



# Nutrient Deficiency Review:

## Decode the Symptoms, Find the Correction

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Deciphering nutrient deficiency symptoms can be compared to real estate: It's all about location, location, location.

Deficiency symptoms appearing on older leaves point to mobile nutrients: nitrogen (general yellowing over the entire plant), phosphorus (purpling) and potassium (purpling/bronzing). Additionally, magnesium deficiencies will show on expanded leaves as interveinal yellowing.



Magnesium deficiency in gerbera

Identifying the underlying cause of the deficiency will guide the correction. For macronutrients, inadequate nutrition is often tied to injector use; inspect injectors for proper operation, use an EC meter to confirm the rate at the end of the hose and

review stock recipes for accuracy. Remember that phosphorus deficiencies can be induced by cold media reducing root function. For ongoing, rain-leached crops, apply liquid feed. The fertilizer will displace water and boost nutrition. Magnesium deficiencies are quickly remedied with Epsom salts.

Deficiency symptoms appearing on younger leaves are tied to immobile nutrients (micronutrients and calcium) and caused by inadequate nutrition, improper pH and/or reduced transpiration (calcium and boron). For cases of low nutrition, apply micronutrient supplements. These products are especially important when using component fertilizers or for crops with higher demand, such as petunias. A complete trace-element

mix is preferred for most crops.

Classic examples of high pH inducing deficiency are interveinal yellowing of young leaves in petunias, calibrachoa, pansy and vinca. For these and other crops, media pH above 5.8 ties up iron in a form unavailable to the plant.



Boron deficiency in viola

Use sulfuric acid to quickly lower media pH. High-acid fertilizers can also be used to correct slightly elevated pH, but the process will be a little slower. Additionally, iron chelate may be applied to further boost iron levels and/or quickly improve leaf color.

**Identifying the underlying cause of the deficiency will guide the correction.**

Calcium and boron require both proper pH and transpiration for uptake. With pH above 6.0-6.2, distortion of young tissue can occur, with tip and edge burn often present for low calcium. Increase airflow and apply supplements: calcium chloride dihydrate sprays (lettuce, ornamental kale, poinsettia) and boron drenches (pansy, petunia, viola).

Consult GGSPRO or your GGSPRO Technical Reference Guide for application rates and methods. The GGSPRO team can also help you diagnose and understand your deficiency symptoms.

### Featured Products

Product	Size	Item No.	Price
Epsom salts	5 lb./pkg	14MGSUL	\$20.02
Peters Professional S.T.E.M. E99900	25. lb/pkg	67-2344	\$82.48
Sprint 138	5 lb./pkg	67-7037	\$126.33
Sprint 330	5 lb./pkg	67-7036	\$60.61
Plantex Nutritrace	25 lbs.	31-11172	\$178.00
Jack's MOST	25 lbs.	33633	\$62.21
Jack's MOSTMB	25 lbs.	JPMOSTNB	\$68.00
Sulfuric acid	1 gal	75-5030	\$33.19
Calcium chloride dihydrate	1 lb.	35315	\$14.49



Calcium deficiency in lettuce