

## Key to Plant Nutrient-Deficiency Symptoms

I. Effects general on whole plant or localized on older, lower leaves	2	
2 Leaves light green. Uniform chlorosis of older leaves, which may die and turn brown. Abnormal production of anthocyanins in stems and leaves. Stems with greatly reduced terminal growth		Nitrogen
2 Leaves dark green. Stunted growth. Abnormal production of anthocyanins resulting in red and purple colors. Death of older leaves. Stems weak and spindly		Phosphorus
II. Effects mostly localized on older, lower leaves	3	
3 Older leaves chlorotic, initially interveinal, beginning at tips of leaves. Margins and tips of leaves may turn or cup upward. If severe, all leaves become yellow or white. Older leaves may drop off.		Magnesium
3 Older leaves mottled, with necrosis of leaf tips and margins. Leaves may curl and crinkle. Internodes abnormally short and stems weak, sometimes with brown streaks.		Potassium
III. Effects localized on new leaves	4	
4 Terminal bud dies. Tips and margins of youngest leaves necrotic and then buds. Initially young leaves pale green with hooked tips, as well as being deformed		Calcium
4 Terminal bud remains alive	5	
5 Leaves light green (never yellow or white), beginning with younger ones. Veins lighter than interveinal areas. Necrotic spots may appear but not common.		Sulfur

- 5      Leaves chlorotic, beginning with younger ones.      Iron  
Veins remain green, except in case of prolonged,  
extreme deficiency.

Source: <http://scidiv.bcc.ctc.edu/rkr/Botany110/labs/pdfs/MineralNutrition.pdf>