

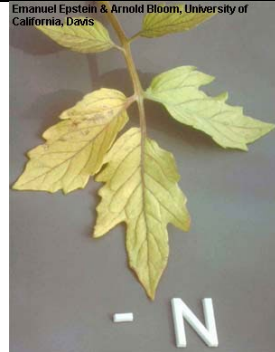
Nutrient deficiency symptoms will vary with plants:

Nitrogen:

used in plant proteins and chlorophyll production.

Mobile

Deficiency: growth reduction, yellow older leaves



Phosphorus:

used in energy transfer within the plant, also root growth in seedlings

Slightly mobile

Deficiency: dull blue-green leaves, with purple tints, stunted growth

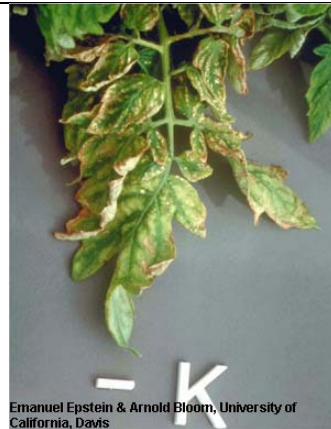





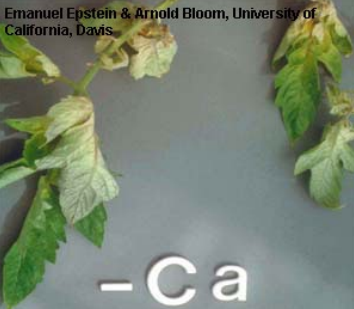








Potassium:

Controls water uptake, regulates opening and closing of stomata, promotes flowers/fruit/hardiness

Very mobile

Deficiency: 'burned' edge to leaves with yellowing of lower leaves, some purple tints, wilting, reduced flowers/fruit



<p>Magnesium: used in chlorophyll production, works with phosphorus in sugar uptake and transport. Slightly mobile Deficiency: chlorosis of older leaves, interveinal chlorosis, sometimes reddish-brown tints and early leaf fall</p>	 <p>-Mg</p> <p><small>Emanuel Epstein & Arnold Bloom, University of California, Davis</small></p>	 <p>RHS</p>	
<p>Calcium: Needed for production of cell walls and cell membranes Immobile Deficiency: Young growth reduced and distorted, and also fruits</p>	 <p>-Ca</p> <p><small>Emanuel Epstein & Arnold Bloom, University of California, Davis</small></p>		
<p>Sulphur: Works in production of plant proteins, catalyst for photosynthesis Immobile Deficiency: Chlorosis in young leaves, lack of flavour in brassicas, low yields in grain crops</p>	 <p>-S</p> <p><small>Emanuel Epstein & Arnold Bloom, University of California, Davis</small></p>		
<p>Iron: involved in photosynthesis, chloroplast function Immobile Deficiency: linked with lack of manganese - new growth yellow, initially interveinal then whole leaves yellow/white</p>	 <p>-Fe</p> <p><small>Emanuel Epstein & Arnold Bloom, University of California, Davis</small></p>		<p>RHS Lime induced chlorosis on</p>  <p><i>Pieris</i></p>

Manganese:
involved in photosynthesis, linked with iron deficiencies
Immobile
Deficiency: new growth yellow, initially interveinal then whole leaves yellow/white



Molybdenum:
involved in plant processes including nitrogen uptake promotes root nodules in legumes
Immobile
Deficiency: required only in tiny quantities, usually seen in brassicas in acid soils, new foliage elongated and twisted



Boron:
involved in cell growth, movement of sugars and pollination and seed set
Immobile
Deficiency: stunting and distortion of growing tips, brittle foliage and stems (brassicas on acidic soils)

