

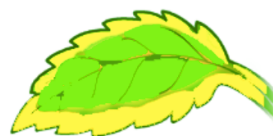
Mineral Deficiencies

- Poorly plants may be showing signs of mineral shortage.
- Conserving and recycling of nutrients on your plot will keep deficiencies to a minimum.
- Apparent shortage can be because a mineral is **unavailable** to plants rather than absent.
- The action of soil life and plant roots increases mineral availability.
- A general remedy is application of liquid seaweed according to the supplier's instructions, or make your own seaweed 'tea'.

Mineral	Signs of shortage	Possible reasons for shortage	Remedy suggestion
Boron (B)	Brittle plants, growing points die, rotting from the inside. Terminal buds die, witches' brooms form	Too much lime, especially in dry weather	Borax as an emergency measure. Use plenty of compost.
Calcium	Tomatoes – new leaves (top of plant) are distorted or irregularly shaped, drying tips and blossoms. Brown patches on fruit.	Sandy, acidic soil-watering issues	Add gypsum or lime
Iron, Manganese	Pale green leaves. Hollow seeds if serious. Iron shortage – youngest leaves lose colour first.	Excess lime, lack of potassium	Epsom salts to 'lock up' lime More compost Green manures to increase availability
Magnesium	Leaves yellow/veins green Brown blotches Older leaves yellowing early	Too much potassium. Lack of organic matter	Short term – epsom salts Long term – organic matter
Nitrogen	Poor growth, leaves pale, yellowing of older leaves at bottom of plant Pink/purple leaf edges on brassicas	Leaching. Lack of organic matter/humus available	Cover the soil. Short term - Manure or compost 'tea' as root drench, urine Longer term – compost
Phosphorus	Stunted growth, leaf tips look burnt, dark green to purple markings on older leaves. (on carrots, purple colour is different to maroon red of carrot fly damage)	Acid soil: pH affects uptake	Bird manure, bonemeal, blood-fish-and-bone Green manure, especially legumes
Potassium	Brown leaf edges. Older leaves may wilt and/or look scorched. Interveinal chlorosis begins at the base, scorching inward from leaf margins. Chocolate spot fungus on beans.	Leaching. No freezing/thawing Excess phosphorus	Comfrey 'tea' Wood ash Potash



** Interveinal chlorosis, a symptom of iron, zinc and manganese deficiencies, evident in yellow parts of leaf.



* Magnesium deficiency symptom in leaf evident in yellow parts of leaf.