COMMON MINERAL DEFICIENCIES FOUND IN PLANTS

NITROGEN: Slow growth of tops and roots; leaves turn yellow-green when young, or to orange, red, or purple when mature (veins may turn purple), beginning from bottom leaves to top; reduction in number of flowers and yield of grain or fruit; slow growth and delay in opening of buds.

PHOSPHOROUS: Similar to Nitrogen except leaf color either dull bluish green with tints of purple instead of yellow or red -OR -leaves dull bronze with purple or brown spots; leaf edges often brown, especially in potatoes.

POTASSIUM: If deficiency is mild, stems are thin, if severe, stems stunt or die and leaves usually dull bluish green, often with yellow streaks between veins, followed by browning of tips and edges, with brown spots developing at edges; leaves rolled starting at bottom leaves; poor root growth, and poor development of fruit, flowers, or grain.

CALCIUM: Begins at the upper leaves; leaves very distorted and curled at edges; edges appear ragged and leaves may have thin yellow bands or be brown and die; roots develop poorly.

MAGNESIUM: Leaves turn yellow, sometimes between veins, sometimes in spots or streaks; then turn brown and die, beginning at bottom of plant.

MANGANESE: Similar to magnesium but symptoms starts at top of plant.

SULFUR: Reduced growth; curling down of leaves at tips. Similar to Nitrogen deficiency except those lower leaves is not lost.

BORON: Begins at upper leaves; leaves become light green (lighter at base) veins turn purple, leaves may have faint streaks and yellowing, then turn orange. Plant stops growing; roots down at tips with tissue breakdown at base; poor growth of tops and roots; flowers drop off; no grain or fruit.

IRON: Severe yellowing of newer leaves (either spotted or total); more often visible in trees than in yearly crops.

ZINC: Molted spots on leaves, first yellowish then yellow or purple-red. Appears late in summer, then leaves drop early. Leaves become crinkled and small.

MOLYBDENUM: Similar to Nitrogen deficiency since molybdenum is required for nitrogen fixing bacteria; leaves become yellow between veins, first on mature leaves. Young leaves may become severely twisted and eventually die.

BACK TO INDEX