



Iron Chlorosis

Plants need nutrients from soil to make chlorophyll, the green pigment in leaves which fosters photosynthesis. Nitrogen, magnesium and iron are among the nutrients a plant needs to make chlorophyll.

"Chlorosis" means "lack of chlorophyll." Specific symptoms are identified with the name. For example, iron chlorosis is a condition due to a lack of iron. Iron chlorosis causes a leaf to become yellow while the veins of the leaf remain green. The newest leaves on ends of branches are the most affected by this condition, although in severe cases all the plant's leaves are affected. In advanced stages, iron chlorosis causes plant tissue to die, manifested as brown scorched areas of the leaf.



Soils along the Front Range are generally alkaline. The beautiful reds at Red Rocks and the Garden of the Gods are evidence of abundant iron in the rocks and soil. In alkaline soils, iron is present in a chemical form less usable by plants. Plants which have a high iron requirement or are less efficient at taking it up from soil, such as silver maple, red maple or certain oaks, often develop iron chlorosis.

Colorado's alkaline soil pH makes certain plants valued in the East, such as flowering dogwood, rhododendron, blueberries and pin oak, difficult to grow here. Adding sulfur to the soil may help to lower soil pH but is also not effective in many cases. Local surface or well water sources can be alkaline. In that case, just watering a yard may partially negate your attempts to reduce soil pH.

Iron sprays applied to the foliage can help prevent or alleviate iron chlorosis. Sprays should be applied only during cooler periods or evenings, rather than during the heat of a summer day. Sprays can stain sidewalks and other such surfaces red, so use them cautiously. The greening of foliage because of foliar sprays may only last a few weeks, and it may be difficult for homeowners to spray all foliage on a large tree. In such instances, it may be best to apply chelated iron compounds to soils.

Chelated, or stabilized iron, can be placed in a series of holes punched in the ground four to six inches deep, throughout the root zone of the tree, but at least two feet from the tree trunk.