HORTICULTURE NEWSLETTER

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IRON CHLOROSIS IS AFFECTING TREES

Why is my tree yellow?
This is a question being asked all over the state. It seems that in addition to all the weather and environmental stress, many trees are showing symptoms of iron chlorosis.

Trees commonly affected by iron chlorosis include pin oak, red maple, white oak, river birch, sweet gum, bald cypress, magnolia, and white pine. This year I have also seen trees like locust and pear affected which signals that many of these trees are under more stress than normal. The variable and often harsh weather this year seems to be making it difficult for these trees to take up iron from the soil.

Classic symptoms of iron chlorosis are yellow leaves with a network of dark green veins. Symptoms may appear over the entire tree, on one side, or be limited to a branch or two. In severe cases the entire leaf turns yellow and the edges of the leaf scorch and turn brown. Plants may eventually die if they suffer iron chlorosis year after year.

Technically speaking iron chlorosis is highly related to soil pH. In Kansas many of our soils tend to have a high pH (above 7.0). The high Ph ties up iron so that it is unavailable to plants. A high soil pH and a tree under stress provide perfect conditions for iron chlorosis.

One of the best methods of avoiding iron chlorosis is by planting tolerant trees. Ash, cottonwood, linden, elm, hawthorn, most oaks, norway maple and ginkgo are usually tolerant.

Before treating for chlorosis it is a good idea to get a soil test done to determine the pH level and confirm the problem. Once confirmed there are several ways to treat the problem.

A foliar application of iron sulfate or iron chelate solution may be applied when the tree is fully leafed out. This will give a quick green up of the leaves but will not last. This is not highly recommended for a tree with a chronic chlorosis problem.

Iron chelates can be used as a soil treatment. Iron chelate EDDHA is most effective in soils with high pH. It can be found in the products Sequestar 6% Iron Chelate WDG, Sequestrene 138 and Millers FerriPlus. It is best to use these products in the spring before growth starts. Dry chelate can be sprinkled on the soil and watered in or dissolved in water and applied as a drench under the dripline of the tree. Normally, soil-applied chelates last only one year.

Trunk injection or implantation is the most long term solution for chlorosis problems and can last for 3 to 5 years. In this method, holes are drilled in the lower trunk and an iron product is fed into the tree. There are both liquid and dry formulations. The preferred time of application is during the spring just after the leaves have fully expanded. In the case of severe iron chlorosis it is best to use a professional arborist to properly administer the tree injection.