Plant Trees not Susceptible to Chlorosis
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There are quite a few yellow trees that are not supposed to be yellow. In most cases, these trees are chlorotic. Chlorosis describes any condition where leaves or needles develop an abnormal light green or yellow color.

The most common cause of chlorosis in trees is a deficiency of iron in the leaves. Other causes include overwatering, overfertilizing with nitrogen, root damage, and deficiencies in manganese or other micronutrients.

Some trees are more likely to become chlorotic. With fall tree planting season arriving, the best way to avoid yellow trees is to not plant susceptible trees. Once a tree develops chlorosis, it cannot be cured and the tree will need to be treated for the remainder of its life. If not treated, it will slowly decline and have branch dieback.

Trees that almost always develop chlorosis are pin oak, silver maple, and Autumn Blaze maple which is a cross between silver and red maple. Trees that show chlorosis fairly often include red and amur maples, swamp white oak, and birch.

With all of the good trees we do not see chlorosis in, why plant one at risk of developing it? Trees that rarely develop chlorosis are red oak, most white oaks, linden, Kentucky coffeetree, elm, honeylocust, ginkgo, hickory, hackberry, Ohio buckeye, eastern redbud and hawthorn.

If you already have a tree with chlorosis, what can be done? If it's a very young, consider replacing it. If it's a large oak tree, the issue is usually a lack of iron in the leaves. It is rarely due to a lack of iron in the soil but because of soil pH.

Soils in Nebraska typically have a high or alkaline pH, especially soils in urban areas or where topsoil has been lost. Most trees prefer a pH range of 5 to 7. In Nebraska, levels of 7.5 to 8.5 are fairly common. While iron and other micronutrients are usually present in the soil in sufficient quantities, the high pH ties up the iron and makes it unavailable to certain trees.

Since soil pH cannot feasibly be changed, we recommend injecting oak trees with iron to manage chlorosis. Because injections cause a wound that never heals, it is important to use an arborist experienced in tree injections and to only inject when leaves begin to turn light green or yellow. For younger trees, there are some options for treating via soil. Ask me about these at kfeehan2@unl.edu.

Injection treatments typically last one to three years or longer and are most effective on oak trees. Other trees do not respond as well to injection treatments.

If the chlorotic tree is an established maple, a deficiency in manganese, not iron, may be the cause. In this case, if the injection method is used, ask the applicator if they're using a micronutrient solution rather than straight iron.

Other practices that can be done to try and reduce chlorosis are avoiding wet, compacted soils. Turn off automatic lawn irrigation systems and only run them when the soil has become dry. Core aerate lawns on a regular basis to help relieve compaction.

Do not fertilize most trees with nitrogen. While there are exceptions, most Nebraska soils are fertile enough for trees. If a tree is growing in a fertilized lawn, the tree is already being fertilized more than needed. Don't add insult to injury by adding additional fertilizer just for the tree.