Why is My Maple Coloring up Early?
By Dawn Pettinelli, UConn Home & Garden Education Center

Over the last few weeks, both the Center and Soil Lab have received several queries about the leaves on certain maple trees changing color earlier than normal. Maples impart vast swaths of color to our visually unrivaled New England fall landscape. Electric orange, iridescent yellows and glowing reds light up the hillsides and valleys thanks in large part to our native maples. But while we are looking forward to their brilliance at the peak of fall foliage which usually occurs around Columbus Day weekend, late August through early September is typically too early for the leaves to turn. So what does this mean?

First, note that there are some maple cultivars that do color up earlier than others. This seems to be more of a random trait so you could have three trees of the same cultivar and only one would exhibit this tendency.

Unfortunately, when the leaves of a tree or shrub start to change color early, this often means that the plants are under some sort of stress. Most of us learned in high school science classes that leaves are green because they produce chlorophyll, which is the essential component that allows the leaves to turn sunlight into the carbohydrates they need to sustain the plant.

Normally, the cooler and shorter days of autumn slow the production of chlorophyll and the other compounds in a plant’s leaves become visible hence the yellows, reds and oranges. The red color in maples is due to a compound known as anthocyanin. It is an anti-oxidant that is typically produced during the fall, or earlier as stored sugars are broken down, and may protect the plant from exposure to environmental or pest problems.
When leaves on any tree or shrub color up early, start by giving the plant a thorough going over to see if any obvious problems can be spotted. Look at the leaves and stems. Are there any signs of insect feeding or are there spots on the leaves possibly indicating a disease?

Take a peek at the trunk. Are there any cracks in the main trunk? Are there signs of mower or weed whacker injury at the base? Another possibility, which is harder to discern, is the feeding damage by voles on the tree roots. Perhaps one can gently explore some of the top feeder roots to see if they are white and plentiful. Look for tunnels under the root system as sometimes chipmunks or other creatures create underground passages for their benefit but upon doing so expose the roots of plants to drying and decline.

Maple leaves turning early image by Dawn Pettinelli, UConn

Review your watering and fertilizing regime. This summer has seen sporadic rainfall where some areas received much more than others. Parts of Connecticut only received 72 to 84 percent of their usual rainfall. Did the tree get enough natural precipitation and if not, did you water it? July was unusually hot across the Northeast with this being Hartford’s hottest July on record. As average temperatures in Connecticut slowly climb, some trees as well as other plants and animals are gradually moving northwards.

A common comment when residents express concerns about tree problems is that they do not see the need to fertilize trees as they grow well enough in the forest unattended. That is true but our native trees have developed coping mechanisms to survive in our low pH, low nutrient soils. Among those is the slow but continual addition of nutrients and organic matter from decomposing leaves falling on the forest floor.

In the home landscape, trees are often planted in lawns and left to fend for themselves. Leaves are raked or vacuumed up and lawn fertilizers, often with pesticides (insecticides, fungicides, herbicides) are applied to turf areas surrounding the trees. If the lawn area is regularly fertilized, often no additional fertilizer is needed for the trees. Otherwise, trees would benefit from fertilization once a year, usually in the spring. If early color is noted on trees in lawns receiving regular fertilizer applications, do note if herbicides are being applied with the fertilizers. If a tree is already stressed and herbicides are applied to its roots (intentionally or not), adverse effects can occur.

Another problem particular to maples is maple decline. This condition mostly affects red, sugar and Norway maples and has been around for over 100 years, but in recent decades it seems to be increasing in its prevalence. It may be triggered by multiple factors. After repeated defoliations, such as occurred with the gypsy moths, chemical changes occur within the plant that make it more susceptible to disease organisms.

In urban and residential areas, drought, construction, de-icing salts and other factors may produce enough stress for plants to defoliate early. To see whether your tree is set for recovery or demise, look at annual signs such as reduced foliar growth, early fall color, dead branches in the upper canopy and poor root growth. Samples can be sent to the UConn Plant Diagnostic Lab for confirmation and treatment suggestions (877) 86-6271.

If your maple is coloring up early, call the Center with more specific information on cultural techniques and changes in the adjacent landscape. For other gardening questions, feel free to contact us, toll-free, at the UConn Home & Garden Education Center at (877) 486-6271, visit our website or contact your local Cooperative Extension center.