

Autumn Leaf Colors

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This season's autumn colors have been exceptional. Shortened day lengths, sunny and warm days, cool nights, and adequate soil moisture provide the perfect conditions to showcase autumn's greens, golds, reds, oranges and coppers in our trees and shrubs. Fall leaf color is a dynamic process, influenced by the decline and production of pigments within leaves. It isn't unusual for leaf colors to fluctuate throughout fall or to have a myriad of colors at the same time on one tree.

Green

Leaf color changes start first with chlorophyll. Chlorophyll is a tough and efficient photosynthetic pigment and is the reason leaves are green. It is also water insoluble, which is why it is difficult to get grass stains out of the knees of pants! The trees' production of chlorophyll slows with autumn growing conditions.

Gold

The carotenes, pigments that are gold and yellow, are already in leaves but are masked because of chlorophyll's abundance. As chlorophyll dies back, the golds and yellows of carotene are revealed. Trees with beautiful gold fall color include the Ohio buckeye, hickory, American elm, ginkgo, American larch, and tuliptree.

Red

Anthocyanins are pigments responsible for burgundy, red and maroon coloration in leaves. While the carotenes are revealed by the loss of chlorophyll, the anthocyanins are actually made in the leaves. Trees with beautiful red leaves in fall are the scarlet oak, Shumard oak, black tupelo, sassafras and black oak.

Orange

Leaves appear orange when they contain both yellow (carotene) and red (anthocyanin) pigments. Look for orange fall coloration on sugar maple and 'Autumn Brilliance' serviceberry.

Copper

Tannins give us the copper and brown hues. Like the carotenes, tannins are already present in leaves and are revealed when both the chlorophyll and carotene pigments die back. Oak trees are most noted for their copper/brown leaves as autumn progresses into winter.

When selecting a tree for autumn leaf coloration, shop in the fall to get a better idea of a tree's leaf color. Genetic variations, provenance (where the tree comes from), adverse weather, and health factors will influence when and how much leaf coloration occurs. More information about trees and their fall leaf colors may be found here: <http://forestry.tennessee.edu/leafid.htm> .