Fall Foliage

By Bobbi Gustafson
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Leaf logic: fall foliage adds color to your garden

It is well into September after an unusually warm and dry summer. At this point the thought of long golden shadows, cooler temperatures, and showers are so welcome.

There are still plenty of bright days. Shorter days and cooler temperatures trigger the formation of a corky layer of cells across the base of a leaf petiole called the abscission layer. This formation decreases the supply of water and minerals to the leaf, reduces the manufacture of chlorophyll, and traps sugars in the leaf. Chlorophyll is a chemical that is responsible for the green color of the plant; when it is reduced, anthocyanin (a pigment) becomes prominent and is the reason for the red and purple color of fall leaves. If anthocyanin is not present, leaves will turn yellow or orange because of the presence of carotene and xanthophyll. These pigments were there all along but masked by the presence of chlorophyll.

Another substance that affects foliage color is tannin. Most prevalent in oaks, hickories and walnuts, it turns leaves brown or dark red. The pH of soil can also change fall leaf color. The leaves of red maples in acidic soil will be brilliant red. Trees in neutral or alkaline soil may exhibit yellow leaves. A dry summer can turn leaves brown before they have the chance to turn to more colorful hues.

Color can be added to your garden by planting trees and shrubs with colorful fruit like roses. All roses develop hips, but Rugosa roses have large, very visible bright red hips. Crab apple, Chinese dogwood, mountain ash, and beautyberry are plants that produce beautiful fruit in the fall and also feed wildlife. For example, beautyberry is a squirrel's version of takeout. They will sometimes take whole branches of berries back to their nest.

An excellent site for a fall color guide can be found online at http://forestry.tennessee.edu/leafid.htm , a website from the University of Tennessee. Each tree is displayed in the leaf shape in the color it turns in the fall. It includes a brief description of the tree. The colors include red, yellow, orange, maroon and purple. Some of the trees shown are predominantly from the East Coast, but most of them grow here as well.

A great idea when choosing any plant is to see and buy it in the season that is important to you. For example, a tag may show a picture of a burning bush, but not all of them turn brilliant red. If that is important to you, then you need to buy your new plant when it is in full red color, or in

flower, or in fruit so you will know what the color will be. Tags may not look like what you are buying.

A crab apple tree provides color and fruit as the season changes to fall. *Photo by Bobbi Gustafson / WSU Skagit County Master Gardeners.*

Some plants that will give you great leaf color in autumn are:

- *Blueberry (Vaccinium sp.)*—red/orange
- *Bradford pear (Pyrus calleryana)*—maroon
- *Burning bush (Euonymus alatus)*—red
- *Crab apple (Malus sp.)*—yellow-orange leaves, red fruit
- *Dogwood (Cornus sp.)*—red-orange leaves, red fruit
- *Ginkgo (Ginkgo biloba)*—yellow
- *Oak leaf hydrangea (Hydrangea quercifolia)*—yellow, red, orange
- *Red or yellow twig dogwood (Cornus sericea*)—twigs are red or yellow
- *Rugosa rose (Rosa rugosa)*—red fruit
- *Scarlet oak (Quercus coccinea)*—red
- *Silver maple (Acer saccharinum)*—orange
- *Smoke tree 'Royal Purple' (Cotinus coggygria)*—red-purple to scarlet
- *Sourwood (Oxydendrum arboretum*)—red (swallowtail butterflies love it)

- *Sweetgum (Liquidambar styraciflua)*—yellow to red
- *Vine maple (Acer circinatum*)—yellow
- *Weeping katsura 'Amazing Grace' (Cercidiphyllum japonicum 'Pendulum')*—red/yellow
- *White oak (Quercus alba)*—orange
- *Winged sumac (Rhus coppalina)*—red
- *Witch hazel (Hamamelis sp.*)—yellow, or the cultivar 'Diane' (H. x intermedia)—red edged in yellow

A Burning Bush (Euonymus alatus) can add brilliant color to a yard in the fall. *Photo by Bobbi Gustafson / WSU Skagit County Master Gardeners.*

RESOURCES:

- "Fall Color Guide." University of Tennessee. http://forestry.tennessee.edu/fallchem.htm
- "The Chemistry of Fall Color." Forest Resources Center. http://forestry.tennessee.edu/leafid.htm.
- Eat the Weeds. www.eattheweeds.com.