



PATHWAYS to Home and Garden

Fall
2004



Gardener's Calendar

Early September

- Divide and replant Peony roots; avoid planting too deep.
- Plant or transplant evergreens.
- Control broad leaf weeds in the lawn.
- Time to seed bare spots in lawn.
- Renew a perennial border by lifting and dividing spring and early summer flowers.
- Remove all weeds from the garden to prevent them from going to seed.

Mid-Late September

- Fertilize your lawn.
- Bring house plants indoor.
- Take cuttings of Coleus, Geraniums, and other plants for winter house plants.
- Plant spring bulbs-Tulips and Daffodils.
- Give Christmas cactus a rest period with cool nights of 55 degrees so they can set buds.
- Divide peonies if this hasn't been done for several years. Slice the clump in quarters with 3 to 5 buds or eyes per division.

Early October

- Lift bulbs of tender flowers after first frost or when the leaves turn yellow (such as Gladiolus, Tuberous Begonias, and Dahlia).
- Start giving poinsettias long nights to bring in flower at Christmas (complete darkness from 5 p.m. to 8 a.m.) until bracts show color.
- Begin storing garden vegetables such as cabbage, squash, carrots, and beets.
- Stake newly planted trees.
- Store Dahlia roots at 40 degrees; avoid humidity or very dry conditions.
- Store Tuberous Rooted Begonias at 45 to 50 degrees.
- Store Caladium at 60 degrees and dry.
- Clean up Peonies and Iris.

Mid to Late October

- Tulips can be planted until ground freezes.
- Protect fruit trees and woody ornamentals from mice and rabbits.



- Harvest and store mature nuts.
- Asparagus, Peony and Rhubarb tops can be chopped for the compost pile after they turn brown.
- Wrap trunks of thin barked young trees with nursery wrap (tree wrap) paper to protect against winter sun scalds.
- Continue to mow grass as long as it continues to grow.
- Still keep Christmas cactus cool this month (50 degrees) to initiate flower buds.

Early November

- Plant deciduous trees until soil freezes.
- Clean up the garden. Put refuse in compost pile.
- Check house plants for signs of yellow or falling leaves, usually caused by change of location.
- Don't let leaves accumulate on the lawn as they shade the grass.
- Water evergreens well before the soil freezes.
- Mound eight to ten inches of soil over crown of roses. Cover with rose cones or mulch.
- Check trees and shrubs for fall wind damage and do corrective pruning.



Mid to Late November

- Protect strawberries with a six inch layer of loose hay or straw mulch.
- Avoid mulching perennials with leaves that pack when wet.
- Store seeds in air-tight container.
- Protect Japanese yew in exposed location against wind and sun damage by using burlap wind breaks.
- Water house plants when soil surface is almost dry. Feed less during winter.



Fall Master Gardener Program 2004

"Garden Flowers and Houseplants"

Sessions will start Thursday, September 30 and will be held here at the UW Fond du Lac Campus in the LGI Room from 9:15 a.m. to 4 p.m. every Thursday, with the last session ending on November 11. For a registration form please contact Gloria at the UW Extension Office. (929-3173).

Fall Colors

The timing and intensity of fall colors can vary, depending on factors such as availability of soil moisture and plant nutrients, as well as environmental signals such as temperature, sunlight, and length of day.

Growing conditions throughout the season affect fall color as does current weather. Colors such as orange and yellow, which we see in the fall, are actually present in the leaf all summer. However, those colors are masked by the presence of chlorophyll, the substance responsible for green color in plants during the summer. Chlorophyll uses sunlight and carbon dioxide from the air to produce carbohydrates (sugars and starch), which the tree uses for food. Trees continually replenish their supply of chlorophyll, which is used up in making food during the growing season.

As the days grow shorter and temperatures cooler, the trees use chlorophyll faster than they can replace it. The green color fades as the level of chlorophyll decreases, allowing the other colored pigments to show through. Plants that are under stress—from conditions like prolonged dry spells—often will display early fall color because they are unable to produce as much chlorophyll.

Yellow, brown and orange colors, common to such trees as birch, some maples, hickory and aspen, come from pigments called carotenoids, the same pigments that are responsible for the color of carrots, corn and bananas. Red and purple colors common to oaks and some maples are produced by another type of pigment called anthocyanin, the pigment responsible for the color of cherries, grapes, apples and blueberries. Unlike chlorophyll and carotenoids, anthocyanins are not always present in the leaf but are produced in late summer when environmental signals occur. Anthocyanins also combine with carotenoids to produce the fiery red, orange, and bronze colors found in sumac and oaks.

Red colors tend to be most intense when days are warm and sunny, but nights are cool—below 45 F. The color intensifies because more sugars are produced during warm, sunny days; cool night temperatures cause the sugars to remain in the leaves. Pigments are formed from these sugars, so the more sugar in the leaf, the more pigment, and, thus, more intense colors. Warm, rainy fall weather decreases the amount of sugar and pigment production. Warm nights cause what sugars that are made to move out of the leaves, so that leaf colors are muted.

Leaf color also can vary from tree to tree and even from one side of a tree to another. Leaves that are more exposed to the sun tend to show more red coloration while those in the shade turn yellow. Stress

such as drought, poor fertility, disease or insects may cause fall color to come on earlier, but usually results in less intense coloration, too.

Bringing House Plants Inside

Many houseplants thrive during the long, bright summer days, especially when properly moved outdoors. But these plants may have some trouble adjusting to indoor conditions when colder weather strikes.

Many of our common indoor plants are native to the tropical or subtropical climates and cannot tolerate cold temperatures. Houseplants should be brought back inside before the outdoor temperature drops to 55 F. If days are warm but night temperatures are cold, a person can consider bringing the plants indoors for the night and putting them back out in the morning.

Many plants will drop leaves in response to the lower light conditions inside most homes. Gradually exposing the plants to lower light intensity before permanently moving indoors should help lessen the shock. However, some leaf drop is unavoidable.

Plants will likely slow down their growth considerably, so less water and fertilizer will be needed. The best moisture meter is your finger. For most plants, a person should allow the soil to dry slightly between waterings. Reduce fertilizer applications or discontinue if plants seem to be in a resting period.

Be sure to inspect plants closely for signs or symptoms of insect attack. Insects such as spider mites and aphids are very prolific outdoors and may increase their population rapidly once they are brought indoors. And, these pests may spread to other plants very quickly.

Often a sharp spray from the garden hose will remove insect pests from houseplant foliage. Insecticidal soaps also work well, particularly on soft-bodied insects such as aphids. Several treatments may be necessary to be sure that the pests are gone. Start checking the plants now, so that control measures will have time to work before the plants are brought indoors.

Needledrop on Evergreens

Evergreens provide green color all year long, but evergreens do shed their older needles to make room for new growth. Evergreen needles have varying life spans, depending on the species. Arborvitae and pine needles live for 2 years, while spruce needles live 3-10 years. Some species of evergreens have a more noticeable leaf drop than others. In autumn, arborvitae and white pine will drop their 2-year old needles all at

once, which can be quite alarming, if you don't realize that it's perfectly normal.

On other species, needle drop occurs gradually, with a small number of needles falling at one time. The older needles of yew shrubs will turn yellow and drop in late spring or early summer.

Inner and lower needles that are hidden from light are usually the first to drop. Pruning excess growth and dead limbs can help open the plant to more light. But, for most plants, there's no need to worry; they are just doing what comes naturally.

Fall Garden Clean Up

While gardeners may still have a few more weeks to enjoy the growing season, it will soon be time to put our gardens to bed for winter. Flowers and vegetables whose foliage has begun to brown and shrivel should generally be removed before winter. Removing the spent foliage is an excellent way to reduce the chance for fungi and insect pests to over winter.

Herbaceous perennials should be cut back to just above the crown of the plant, the place where the stems join the roots. Annual plants should be completely removed from the garden. Plant refuse can be composted to recycle into organic matter to add to the garden soil next year. Obviously, some plants, such as ornamental grasses, provide winter interest in their dried state. In areas where the soil is prone to erosion by wind or water, such as on a slope, leaving the dead stems can help hold soil in place. In these cases, plants can be left until later winter or early spring. Make sure to cut back the dead stems before the new foliage comes up.

Clean up of fallen tree leaves may be needed, especially around mature, large-leaved trees, such as maple and oak. They can easily be turned into valuable, soil-enhancing organic matter. Dry leaves can be plowed or tilled under in the vegetable or annual flower beds, in fall, to provide a source of organic matter. Shredding the leaves first will speed the breakdown, so that the leaves will not be visible by spring. Be sure to mix the leaves into the soil, rather than leaving them on top through the winter, to avoid keeping the soil too cold and wet to work in the spring.

Tree leaves can be recycled directly on the lawn. Use your power mower or shredder/vacuum to break dry leaves up into smaller pieces. A mulching blade on the mower will speed this process, but even a standard blade will do an adequate job. For large leaves like maple it may take several passes to get a finely shredded product. Once the leaves are pulverized, they will break down quickly. A fall application of nitrogen fertilizer (about 1 pound of nitrogen per

1,000 square feet) will help speed decomposition of the leaves and also will benefit the grass plants.

Fall leaves also make great composting ingredients, especially when mixed with green trimmings and grass clippings. Again, the smaller the pieces, the faster they'll break down, so shred or chop dry leaves before adding them to the compost pile. If a person does not have green trimmings or grass clippings, add a source of nitrogen to the leaves, such as commercial fertilizer or dry cow, horse, sheep or poultry manure.

Last, but not least, shredded leaves can be used as a winter mulch to protect tender perennials through the coming harsh weather. Shredding the leaves will help prevent them from packing down as they get wet and smothering the plants that they are supposed to protect. To provide winter protection, apply a 3-6 inch layer of shredded leaves over the top of tender perennials after several hard freezes. The goal of winter mulch is to keep plants dormant through the winter, so it must be applied after the ground is cold and plants are fully dormant. The timing of application will vary from year to year with the weather, but generally will be appropriate sometime around Thanksgiving.

Winter Mulching of Plants

Winter mulch isn't necessary for all garden plants, but it can mean survival for some less hardy ones. Winter mulch has a different purpose than summer mulch. The main benefits of winter cover are to protect against wide temperature fluctuations in the soil and to prevent extreme cold temperatures from harming plants.

The goal is to keep the plants dormant, rather than to keep them warm. If plants are kept too warm, they may break bud and the subsequent tender growth will be killed by winter conditions. On the other hand, winter mulch does provide some insulation against severe low temperatures.

It also protects the soil from wide temperature fluctuations, keeping plants from being damaged by heaving. Soil tends to heave when subjected to extreme temperature changes, pushing plant roots up out of the ground. Heaving is most harmful to shallow-rooted plants, such as strawberries, and newly planted specimens of any kind that have not yet had a chance to develop solid footing.

Timing is critical when applying winter mulch. Applying it too early can smother the plant and encourage disease development. Once the plants are completely dormant and temperatures are consistently below freezing, then the winter mulch can be applied. In most cases, 2 to 4 inches of organic material, such as straw or marsh hay will provide adequate protection.