

FALL COLORS OF TREES

Part of the allure of fall foliage is color variation. There are trees that turn red, purple, yellow, orange and brown. Specific plant pigments determine individual colors. Foliage derives its normal green color from chlorophyll, the substance that captures the energy of the sun. Other pigments produce fall colors. Reds and purples are caused by anthocyanins, yellows by xanthophylls, and oranges by a combination of carotenes and xanthophylls. Browns are the result of tannins present in the leaf. Most of these substances are present throughout the growing season but are masked by the green color produced by chlorophyll. Anthocyanins are the exception and are produced after the chlorophyll is destroyed in the fall. If you have ever seen pictures of New England in the fall, you have probably wondered why trees in Kansas usually do not color as well. This difference is partly because of the tree species prevalent in New England. Certain oaks and maples naturally produce good color. Coloring also is influenced by the weather. Warm, sunny days and cool nights are ideal for good color. The sunny days encourage photosynthesis and, thus, sugar accumulation in the leaves. As fall progresses, each leaf develops an abscission layer at the base of the petiole, or leaf stem, that prevents these sugars from being transported down the trunk to the roots for storage. This high sugar content in the leaves produces more intense colors. Cloudy days and warm nights prevent some of the sugar accumulation in the leaves and results in less vibrant colors. Weather during other parts of the growing season also can have an effect. Heavy rains in the early spring or hot, dry weather during the summer can both have a deleterious effect on fall color. The length of time a tree maintains fall color also depends on weather. Reds, yellows and oranges are short-lived when trees undergo freezes.

Winter Storage of Summer Bulbs

As winter approaches, we need to start thinking about storage of the bulbs that will not survive Kansas winters. The bulbs of gladiolus, caladium, dahlia, tuberous begonia, calla lily, and canna lily need to be dug and stored so they can be planted next year. Actually, the storage organ of the above plants is not a true bulb. Canna and calla lilies are rhizomes, caladium, and tuberous begonias are tubers, gladiolus is a corm, and dahlia is a tuberous rooted plant. All of these plants should be dug after frost has browned the foliage. Then, allow them to dry for about a week in a shady, well-ventilated site such as a garage or tool shed. Remove any excess soil and pack them in peat moss, vermiculite, or perlite. Make sure the bulbs don't touch so that if one decays, the rot doesn't spread. Dusting them with fungicide before storage will help prevent them from rotting. Caladium should be stored between 50 and 60 degrees F. The other bulbs mentioned should be stored near 40 degrees F. Finding a good spot to store the bulbs may be difficult. Some people place them against a basement wall farthest from the furnace and insulate them so the wall keeps them cool.

Garden Mums

As soon as garden chrysanthemums are done flowering, you may cut the plants back to 2 to 3 inches high. Some gardeners prefer to leave the top growth so that it provides some protection from fluctuating soil temperatures. If you choose to cut the tops off, apply a layer of mulch over the top of your mums after the ground has frozen or if the forecast calls for a sharp drop in temperature. Mums should not completely dry out during the winter. It may be necessary to water occasionally if sufficient rain or snow has not fallen.

There is Still Time to Plant Spring-Flowering Bulbs

Generally, it is recommended to plant hardy bulbs (especially daffodils) in October to give them enough time to root before winter. But it is certainly not too late to plant them now. As long as the soil temperatures are above 40 degrees F, the bulbs should continue root development. Although many of the best bulbs have probably already been purchased, garden centers may still have a good selection. Be sure to select large, firm bulbs that have not begun to sprout. While many bulbs can adapt to a wide range of soil types, none can tolerate poorly drained soil.

Prepare the planting bed by adding organic matter such as peat moss, well-rotted manure, or compost and mix into the soil. Adequate fertility is essential. It is best to rely on a soil test to determine what nutrients are needed. In the absence of a soil test, or if phosphorus is needed, add a low analysis, balanced fertilizer such as 5-10-5 or 6-10-4 at the rate of 2 to 3 pounds per 100 square feet of bed. Mix all amendments thoroughly with the soil before planting the bulbs. The size and species of the bulb determines how deep to plant. In general, the depth to the bottom of the bulb should be about 2 to 3 times the size of the bulb, but check the planting instructions specific to each particular flower.

Apply Late-Season Nitrogen Application in November

November is the time to give cool-season lawns the last nitrogen application of the season. Why November? Because while top growth slows in response to cool temperatures, grass plants are still making food (carbohydrates) by photosynthesis. A November nitrogen application helps boost the photosynthesis rate. Carbohydrates that are not used in growth are stored in the crown and other storage tissues in the plant. These carbohydrate reserves help the turfgrass green up earlier in the spring and sustain growth into May without the need for early-spring (March or April) nitrogen. Those early-spring nitrogen applications are less desirable because they can lead to excessive shoot growth and reduced root growth. Other benefits of November-applied nitrogen for cool-season grasses include improved winter hardiness, root growth and shoot density. How much should you apply? One to 1 to 1 ½ pounds actual nitrogen per 1,000 sq. ft. of lawn area is sufficient. Following the recommended spreader setting on the fertilizer bag should apply the correct amount of fertilizer. In order for this application to be effective, the nitrogen must be readily available to the plant, because the growing season is nearly over. Therefore, for a November application, use a soluble (quickly-available) nitrogen carrier such as urea or ammonium sulfate. Many turfgrass fertilizers sold in garden centers and other retail outlets also contain soluble nitrogen. Avoid products that contain water-insoluble nitrogen (slow-release) for this application. As always, sweep up any fertilizer that gets on driveways, sidewalks, or streets and reapply it to the lawn.