Time to Plant Spring-flowering Bulbs

Late September through October is an excellent time to plant spring-flowering bulbs such as crocus, tulips, and daffodils. These plants need to develop roots in the fall and must meet a chilling requirement over the winter in order to bloom in the spring.

Choose a planting site that has full sun to partial shade. The ideal soil would be a sandy loam, but even poor soils can be used if organic material such as peat moss, compost, or aged bark is mixed in. For example, a heavy clay can be amended by mixing in one-third to one-half organic material. Soil pH should be between 6.0 and 7.0.

Bulbs need good aeration as well as good drainage for proper development. It is best if the bulbs are given 12 inches of prepared soil. If one-third organic material were added, this would require mixing 4 inches of organic material with 8 inches of soil. Incorporate about 3 pounds of a complete fertilizer such as a 5-10-5 per 100 square feet during preparation or fertilize according to soil test.

Planting depths vary depending on the size of the bulbs. For example, tulips and hyacinths are set about 6 inches deep, and daffodils are put 6 to 8 inches deep. Smaller bulbs are planted shallower. As a rule of thumb, bulbs are planted two to three times as deep as their width. Planting depth is the distance from the bottom of the bulb to the top of the soil. Large bulbs are normally spaced 4 to 6 inches apart, and small bulbs about 1 to 2 inches. Planting in clumps or irregular masses produces a better display than planting singly.

After placing the bulbs at the proper depth, replace half the soil and add water. This will settle the soil around the bulbs and provide good bulb/soil contact. Add the remaining soil and water again. Although there will be no top growth in the fall, the roots are developing, so soil needs to be kept moist but not soggy. Mulch can be added after the soil has frozen to prevent small bulbs from being heaved out of the soil by alternate freezing and thawing. (Ward Upham)
ORNAMENTALS

Planting Trees in the Fall

The fall season can be an excellent time to plant trees. During the spring, soils are cold and may be so wet that low oxygen levels inhibit root growth. The warm and moist soils normally associated with fall encourage root growth. Fall root growth means the tree becomes established months before a spring-planted tree and is better able to withstand summer stresses. The best time to plant trees in the fall is early September to late October. This is early enough that roots can become established before the ground freezes. Unfortunately, certain trees do not produce significant root growth during the fall and are better planted in the spring. These include beech, birch, redbud, magnolia, tulip poplar, willow oak, scarlet oak, black oak, willows, and dogwood.

Fall-planted trees require some special care. Remember, that roots are actively growing even though the top is dormant. Make sure the soil stays moist but not soggy. This may require watering not only in the fall but also during the winter months if we experience warm spells that dry the soil. Mulch also is helpful because it minimizes moisture loss and slows the cooling of the soil so root growth continues as long as possible. (Ward Upham)

MISCELLANEOUS

Adding Organic Materials Directly to the Garden

If the summer weather has brought an early end to your garden, consider adding organic materials directly to the soil rather than composting. Materials such as residue from lawn renovation, rotted hay, or rotted silage can be added and then tilled in. Avoid grass clipping from lawns that have been sprayed with a crabgrass killer. This product can carry over and harm the garden the following year. Crabgrass preventers are fine but crabgrass killers are not.

Organic materials can be spread to a depth of about 3 inches and tilled or dug in. Coarser materials such as tree leaves or garden residue should be shredded before tilling. A lawn mower with a bagging attachment can be used to shred this material and collect it in one operation. Be sure the soil is not too wet before tilling. During warm weather, the material will decompose quickly and the process can be repeated every two weeks. Later in the fall, it may take longer. This process can be repeated from now until late November to early December.

Remember that organic matter helps almost any soil. It improves clay soil by improving tilth, aeration and how quickly the soil takes up water. In sandy soils, it acts as a sponge by holding water and nutrients. (Ward Upham)
Moving Houseplants Inside for the Winter

Many people with houseplants move some of them outside for the summer to give them better growing conditions and help them recover from the stress of an indoor environment. But as fall approaches and night temperatures approach 50°F, it is time to think about bringing plants inside for the winter. Plants that have spent the summer outside should be inspected for insects and disease before bringing them inside. A sharp spray from a garden hose can remove insects or mites from houseplant foliage. Insects in the potting soil can be forced out by soaking the pot in a tub of lukewarm water for about 15 minutes.

Houseplants that have been kept outdoors are accustomed to receiving much more sunlight than they do indoors. So how do we help houseplants acclimatize to the lower light levels inside? Houseplants brought in from outside should be started out in an area of the home that receives plenty of light, and then gradually moved to their permanent, darker location. This process should take four to eight weeks depending on the degree of difference in light levels between the initial and final location of the plant.

Understanding plant processes allows us to anticipate potential problems. Acclimatization gives houseplants a greater chance of retaining leaves and avoiding the stress of completely replacing them. (Ward Upham)

Beware of Soil Degradation

Did you know terracing crops and redistributing runoff water are ancient soil stability practices that date back to A.D. 600? “Building Soils for Better Crops” states that trying to control soil degradation, especially soil erosion, has been occurring for centuries. Soil degradation comes in several forms including erosion, compaction, and contamination. Erosion occurs when a force, such as wind or water, displaces soil. The historic “Dust Bowl” in the 1930s is the perfect example of soil erosion caused by wind. Soil erosion can be reduced by terracing crops on slopes, reducing tillage, and maintain ground cover (cover cropping). Soil compaction degrades soil stability by reducing the amount of space between soil particles, which keeps water, nutrients and roots from moving/growing easily through the soil. Compacting of soils can occur from the use of vehicles and heavy equipment such as tractors, tillers, mowers. The best ways to manage soil compaction is to prevent it from happening by minimizing the use heavy equipment including vehicles, especially on wet soil. Although soil aeration may be able to reverse the effects of soil compaction, prevention is more cost effective. To determine whether soil is compacted, watch this video, provided by University of Wisconsin-Extension, on how to use a tool called a penetrometer, https://bit.ly/2Mm6sNT. Lastly, soil contamination can degrade your soil’s quality. This can happen by human or natural activities. Natural contamination from salts and excessive sodium are common and can be tested by the K-State soil testing lab. “Building Soils for Better Crops” mentions that in urban areas lead and other heavy metals can be of concern, but in some cases adding manure or other organic amendments can reduce
contaminants. K-State has a publication all about gardening on lead-contaminated soils at this link, [https://bit.ly/2p4arFy](https://bit.ly/2p4arFy), including human health effects, exposure pathways, and factors to consider. Soil degradation is and will continue to be a concern for growers and gardeners, but understanding how and why we must prevent erosion, compaction, and contamination will lead to better soils for better crops. For more information about soil degradation, follow this link, [https://bit.ly/2Qp5FiA](https://bit.ly/2Qp5FiA), to “Building soils for Better Crops” Chapter called Soil Degradation: Erosion, compaction, and contamination and watch these videos, [https://bit.ly/2Nb3Pnq](https://bit.ly/2Nb3Pnq) (part 1) and [https://bit.ly/2CQo7xX](https://bit.ly/2CQo7xX) (part 2), provided by the University of Minnesota Extension about soil erosion and compaction. (Chandler Day)

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