

Magic from the Manual: Herbaceous Perennial Basics

By Laurie Robinson, Bailey Nurseries, Inc.

A perennial can be broadly defined as an herbaceous plant that lives for more than three years. Perennial plants die back to the ground at the end of the season and reemerge the following year. The life expectancy of each perennial varies. Some will last for only a few years, however, peonies can live for many decades. Comparatively, an annual completes its life cycle in one growing season.

Perennials have some disadvantages. Initially, the plant cost is higher than annuals, but if pro-rated over the years, the actual cost can be less expensive than annuals. Site preparation should be more thorough than for annuals since any remaining perennial weeds will eventually create major maintenance problems. The actual planting operation is likely to be more labor intensive, but occurs only once. Some plants will need dividing every three to five years. Perennials need to be divided or renovated every six to eight years.

Propagation of Perennials

Perennials can be propagated by either sexual propagation from seed, or by asexual propagation from divisions, rooted cuttings, or tissue culture. Although many perennials can be commercially started from seed, named cultivars will not propagate true from seed. Starting plants from seed is slow and, therefore, not practical for most homeowners. Species perennials and some named varieties such as *Echinacea purpurea* 'Magnus' produce seed, which produces plants similar to the parent. Perennial seed is generally available through wholesale seed houses in North America and Europe. Most perennial seeds require scarification and/or stratification for optimum germination. Some seeds also require light to germinate. Seeds should be buried to a depth of two to three times the diameter of an individual seed. Commercially, sophisticated seeding machines place the correct number of seeds per planting cell and at the proper depth. Seedlings are grown to a specific size, and then transplanted into large plugs or pots, and grown on to salable sizes. Asexual or vegetative propagation creates a plant that is identical to the parent plant. Tip cuttings from growing stems should be treated with a rooting hormone and stuck in a rooting medium that is kept moist throughout the rooting process. Rooting time will vary with the type of plant being propagated. Some perennials such as Papever have roots that produce new plants when cut into sections and planted in a growing medium. Many perennials form large clumps such as *Hosta* and *Hemerocallis*, which can be divided into many plants. This is known as crown division. Entire clumps are dug with as many roots as possible and are cut into several divisions. If buds or "eyes" are present in the clump, each division should contain a minimum of two to three "eyes." North America and the Netherlands specialize in selling bare root divisions.

Plant Selection

In a large perennial garden, plants should be planted in groups. The large, tall plants should be in groups of three or more, medium sized plants in groups of at least three to five, and the smaller plants, five or more. Learn the height and spread of different varieties so they can be spaced properly. Choose plants for each site, based on the amount of light the garden receives. Full sun is generally considered six to eight hours of direct sunlight. Part sun/part shade is four to six hours of direct sunlight a day, while shade is considered less than four hours of direct sunlight. The time of day the garden receives light is critical as well; typically, afternoon light is the most intense during the summer months. Care should be taken when selecting plants so that the colors, size, texture, fragrance, and form pleasantly relate to one another and to permanent landscape features. Many perennials are grown specifically for their beautiful foliage with great color and texture. Some flowering perennials have good looking foliage all season long. Others, such as *Liatris* and *Lilies*, have foliage that dies down rather early in the season.

Planting

The soil should be free of perennial weeds prior to planting. Perennial weeds should be killed with systemic herbicides. A deep sandy loam is the ideal soil for perennials. If the soil is sandy or clay, generous quantities of organic matter should be incorporated into the soil prior to planting. The topsoil should be 15-18 inches deep, and the soil should be spaded to a depth of eight to ten inches. Adding phosphate prior to tilling is often beneficial since it does not readily move through the soil profile and it is required for root development. Fertilizer should be added based on a soil test. If this is not practical, two to three lbs. of 18-18-8 fertilizer per 100 square feet will be beneficial. This fertilizer is 50 percent slow

release so it should last the entire season. The easiest way to fertilize an entire garden is to broadcast the fertilizer using a rotary spreader.

Culture

Spring care for perennials normally consists of removal of dead plant tops and winter mulches. Perennials need regular, thorough watering throughout the growing season, unless all varieties planted are adapted to dry conditions. Many native perennials are suitable for drier landscapes. Check the soil two to three inches deep to determine the need for irrigation. For most perennials, one inch of water per week, applied at one time, is usually adequate. Organic mulch is advantageous for perennials, as it will keep the soil cooler and more evenly moist. Mulches inhibit weeds and keep soil from splashing on the leaves of the perennials, thereby preventing some foliar disease problems. Install organic mulches, such as wood chips, bark mulch, or cocoa bean mulch, in spring as soon as the ground warms up to about 60° F. Do not place mulch up against the growing stems or crowns, as that can smother them or cause disease problems. Wood mulches will break down with time, so additional mulch can be added periodically. Perennials will benefit from regular fertilization, although perennials do not need high fertility. Top dress with a soluble 10-10-10 or a 50 percent slow release 18-18-8 granular fertilizer. Water-soluble fertilizers such as Miracle-Gro or Peters 20-20-20 can also be used, but they are more expensive and do not last as long as a slow release product. Fertilization is best done in the spring and early summer months. Reduce fertilization in late summer and early fall, unless the plants are nutrient deficient. When top dressing, do not allow fertilizer granules to stay on the foliage or rest in the axils of the leaves. Weeds can compete with perennials for moisture and nutrients and can harbor diseases and insects. Weeds can be prevented with the use of a pre-emergent herbicide, or they can be removed mechanically or by hand. Post-emergent herbicides should only be used with great care and applied with the wipe method, rather than a spray. Deadheading or removing spent blossoms from perennials will keep them looking clean and may help force some new growth that will bloom again later in the season. It also keeps perennials from going to seed, which can inhibit vegetative growth.

Fall care normally consists of the removal of diseased foliage. For winter protection, the tops of healthy plants should be left to help catch leaves and snow which provides additional winter protection. If the perennials are marginally hardy, apply winter mulch of marsh hay or straw after the ground is frozen and stays frozen. Remove the mulch as soon as it warms. For most perennials, the control of pests and diseases is similar to that for annuals. Since perennial plants stay in the same place for years, disease inoculum can accumulate to levels requiring control. This can occur with peonies, lilies and iris. Provide good air circulation and irrigate early in the day to prevent having wet foliage during the night. Some insect control may be necessary especially if the perennials are susceptible to viruses carried by leafhoppers or thrips, or if only a few varieties of perennials are used. Most disease problems must be addressed early in the season and preventative measures taken throughout the season. All pest problems should be attended to when first noticed. Please refer to Chapter 18 for lists of perennial varieties for different cultural and ornamental qualities.

Questions:

1. T F The time of day the garden receives light is critical; typically, afternoon light is the most intense during the summer months.
2. T F Fertilize herbaceous perennials until late fall, even if the plants are not nutrient deficient.
3. T F The majority of named, perennial cultivars are propagated asexually from divisions, rooted cuttings, or tissue culture.

Answers:

1. T; 2. F; 3. T

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