



Introduction to Perennials

Herbaceous perennials are plants that bloom year after year. Their tops die back to the ground each fall, but their crowns and root systems remain alive (though dormant) during winter. They regrow from those roots and crowns when conditions are right the following spring.

Unlike annuals, herbaceous perennials usually don't flower their first season when grown from seed. Instead, they channel their energy into their roots to make sure they make it through the winter. Nurseries and garden centers sell established perennial plants that often flower the first season you transplant them into your garden.

Perennials have many advantages:

- They don't have to be planted every year. Once established in a suitable spot, they will come back year after year -- some for decades.
- Some herbaceous perennials will only thrive if you dig them up every few years and divide the root systems. Each time you do, you turn what was once a single plant into several (or sometimes many) new plants you can replant or share.
- Perennial gardens are dynamic. They change with the season. Each perennial emerges from the ground, grows, and flowers at its own special time -- some early, some late. Unlike annuals, which usually bloom for a long time, perennials bloom for about 1 to 6 weeks, depending on the species. By carefully selecting plants with a variety of bloom times, your garden will change through the growing season and you'll always have something in flower.
- In addition to a wide variety of flower colors and forms, many perennials have attractive foliage that adds visual interest even when they are not in flower.
- Perennials require an investment in either time or money. They are more expensive than annuals if you buy established plants. If you start them from seed, they are slower to mature and flower. When

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you consider that they come back every year, however, they are a great value.

Other plants are also perennials. Trees and shrubs can be incorporated into flower gardens, but they are a different category of plants -- woody perennials. They don't die back to the ground each year, but regrow from live buds on their above-ground stems. Spring-flowering bulbs are a type of herbaceous perennial, but they are usually considered a separate category because they have special needs. Perennial ornamental grasses and ferns likewise require unique practices. Some herbs are herbaceous perennials that can be incorporated into flower gardens.

Biennials are a group of herbaceous plants that fall in the gray area between annuals and perennials. When planted from seed, biennials do not flower their first season. The plants are often low-growing rosettes that are easily mistaken for weeds. Their roots overwinter much like perennials. They flower in their second season (often growing quite tall) and frequently reseed themselves (if you allow the seed to mature), then die. Some common biennial flowers include foxglove, hollyhocks, dame's rocket, and lunaria.

The gray area comes because some biennials -- foxgloves, for example -- may flower in their first year grown from seed, just like an annual. Other biennials occasionally overwinter and flower a second year and are often called "weakly perennial." These plants are sometimes lumped in with perennials in catalogs. If you want biennials to reseed and flower in the same spot every year, be sure to plant them there two years in a row. That way, you'll always have some first-year vegetative plants and second-year flowering plants.

It's also possible to mistake some prolifically reseeding annuals for perennials, because every year new plants appear where the old plants were the previous season. But it is the seed -- not the roots -- that are overwintering in the soil. Remove seedheads before annuals mature if you want to prevent them from reseeding.

Site and Soil

The first thing to consider before investing in perennial plants is winter temperatures. Some perennials can withstand bitter cold winters that will kill others. To tell which perennials will overwinter where you garden, determine your USDA Hardiness Zone. In New York, these zones range from frigid Zone 3 in parts of the Adirondacks (where temperatures can drop to -40 degrees F), to the relatively mild Zone 7 on parts of Long Island (where the temperature seldom drops below 0 degrees F).

Look for hardiness information on plant labels or catalog listings. If a plant will survive winters in your zone, it is said to be hardy to that zone. Tender perennials are those that are not hardy in your zone, but can sometimes be overwintered by digging up their roots and storing them in a cool place or moving the plants into a greenhouse.

Match your plants to the amount of sunlight your site receives. Many perennials need full sun -- six or more hours of direct sun a day. Some, such as hostas and coral bells, do well in the shade. Also consider the balance between good air circulation (which helps prevent disease) and protection from strong winds (which can dry out soil and plants).

Because your perennials will grow in the same place for at least several years, it is particularly important to do a good job of preparing the soil. Most perennials require well-drained soil. Avoid putting beds in low-lying areas where water pools after heavy rains, or be sure to choose perennials that prefer boggy areas. Similarly, there are perennials that will tolerate other less-than-ideal sites, including those with dry soil, low fertility, and other conditions.

If your site has not been planted before, start improving the soil in the fall before spring planting, or in early summer before fall planting. Kill the sod with organic or plastic mulch, herbicide, or by turning it over with a shovel. Hoe out any weeds or grass that survive. The site should be level or only gently sloped to keep soil from eroding.

Work in three to six inches of organic matter (such as well-rotted manure) to improve the soil. This is particularly important to improve drainage in heavy clay soils or improve water-holding capacity in sandy soils. Apply about 2 pounds per 100 square feet of low-nitrogen fertilizer such as 5-10-5 or 5-10-10 or an equivalent organic source and work it into the top 4 to 6 inches of soil.

Contact your local Extension office for information about how to test your soil to find out your pH and nutrient levels. They may suggest a more complete soil test from the Cornell Nutrient Analysis Lab. Follow the directions on your soil test report about adding lime to increase pH or adding fertilizer to correct nutrient deficiencies.

If **deer** are a problem at your site, choose plants that deer tend to avoid. Other alternatives include regularly applying deer-feeding deterrents to plants or installing 6- to 8-foot-tall deer fencing or other barriers.

Planting Options

The easiest way to get started with perennials is to purchase a perennial

The easiest way to get started with perennials is to purchase nursery-grown plants at local outlets or through mail-order or online catalogs. You can be reasonably certain that local outlets will sell plants when it is a good time for you to plant them in your garden. Mail-order nurseries usually ship plants at the right time for planting in your area. (Mail-order outlets ship dormant roots of some species instead of live plants.)

The best time to plant perennials varies from species to species. In general, spring is a good time to plant perennials that flower in summer and fall. Late summer and fall is a good time to plant perennials that flower in spring and early summer. Some plants are fussy about when you plant them. Others are more forgiving.

Before planting, remove any weeds that may have cropped up in your previously prepared planting bed. Loosen the soil where you will plant the perennial and dig a hole large enough to accommodate the root system.

If the roots are pot-bound -- closely pressed against the side of the container and growing in circles around the inside -- tease them out so they can grow outward into the surrounding soil. If you don't, they may keep growing in circles and the seedling will remain stunted. In severe cases, you may need to use a pruning shears or a knife to make three or four cuts into the rootball. This will stimulate new root growth out into the soil. Pinch back any flowers and flower buds that have formed on the plant and perhaps a little of the foliage to compensate for the root damage.

It is important to plant most perennials at the same depth as their container depth. Planting too deep or too shallow stresses the plants. If planting dormant roots, carefully follow directions concerning the proper depth of planting.

Water plants thoroughly after transplanting. Don't let the soil dry out for the first week or two while the roots get established. Check daily to make sure that the soil around the transplants is moist below the surface and that the plants aren't wilted. Mulching can help soil retain moisture.

Be sure to space plants properly. Refer to the plant label about specific spacing suggestions for the variety you are growing. (Use spread information in plant database as a guide.) It may take perennials several years to reach their full size. Consider growing annuals in between them until they fill out.

Fellow gardeners are often a good source of perennial plants, especially when they have extras to share when they divide plants. Make the most of gift plants by making sure that you get enough information from your friends about what the plant needs to thrive. Even if they don't know the genus and species, at least find out what soil and sun conditions the plant enjoyed before it was divided.

You can also grow perennials from seed, either starting them in pots or flats or sowing them directly in the garden. Compared with annuals, many

trats or sowing them directly in the garden. Compared with annuals, many perennials are slow or difficult to germinate, grow slowly when young, or have other special requirements. For example, some need to be sown in summer and exposed to the cold over winter before they'll germinate. Keep in mind that seed saved from your own perennials may not breed true. They may produce plants that have remarkably different flower color, size, or other characteristics from their parents. For more information on seed starting, see [How to Grow Annuals](#).

Caring for Perennials

In-season mulching

Most perennials benefit from applications of organic mulches during the growing season to retain moisture in the soil and smother weeds during the growing season. Grass clippings, shredded leaves or bark, compost, and other organic materials also improve the soil as they break down.

Watering

While some perennials are drought-tolerant, many need plenty of water. If the soil dries out due to lack of rain, it's important to thoroughly soak the soil when you water, not just wet the surface. It's also important to keep the foliage and flowers as dry as possible to prevent disease. Soaker hoses and drip irrigation do this best. If you use sprinklers, run them in the morning so that the plants dry quickly in the sun. Watering individual plants by hand takes patience to supply enough water to thoroughly soak the soil.

Fertilizing

Most perennials do not require heavy fertilization. You can work in a small handful of low-nitrogen fertilizer (5-10-5, for example) in a ring around the plant in early spring, and perhaps again two more times at 6-week intervals. Fertilize late-flowering plants once more in late summer. Total application should be less than 4 to 5 pounds per 100 square feet. Keep fertilizer off foliage to prevent burning. Use slow-release or organic fertilizers to reduce burning concerns.

Staking

Some taller perennials tend to fall over, especially when they are heavy with flowers. To keep them upright, you can locate them so other plants help support them, or back them up against a fence or other structure and fasten them with twine. Another alternative is to insert stakes of wood, bamboo, or other unobtrusive material in the soil adjacent to plants while they are still small and, as they grow, fasten the plants to the stake. Be careful to avoid damaging roots. Other commercial products are available to support plants.

Pinching

Some branching perennials respond well to pinching -- removing the growing tips by pinching off the small, developing leaves at the ends of stems. This forces more lateral growth, making the plant bushier and shorter. Aggressive pinching may delay flowering in some species or cause plants to flower at a shorter height. Asters, boltonia, Russian sage, garden phlox, and upright sedums (such as 'Autumn Joy') respond well to pinching.

Thinning

This practice helps increase air circulation and prevent disease in perennials, such as garden phlox and beebalm, that are prone to mildew and fungal leaf spots. When these plants are about a quarter of their full height, cut half of the stems to ground level. This can also increase stem strength and flower size.

Pruning before flowering

You may want to cut back some perennials by 12 to 18 inches in early summer. Prune them before flower buds are set or, for late-summer or early-fall blooms, after the buds are set but before flowers open. (Caution: With some species, pruning after flower bud set will eliminate flowering altogether.) This will delay flowering and shorten flowering height, so plants are less likely to flop without staking. For example, if you cut back coneflowers in early June, they will bloom until late September. If cut back in early July, they will bloom into October.

Pruning after flowering

Some early bloomers, such as creeping phlox, perennial candytuft, and rockcress, may bloom again if sheared back by half immediately after their first bloom. Many summer bloomers benefit by cutting back to the leaves at the bottom of the plant after flowering. Try this with yarrow, ladies' mantle, shasta daisy, delphinium, cranesbill (geranium), catmint, salvia, and veronica. Depending on species, age, and other factors, other summer bloomers do better with less aggressive pruning.

Disbudding

With some perennials, especially those used for cut flowers such as peonies and chrysanthemums, you can encourage fewer but larger blooms by removing the smaller lateral flower buds, forcing plants to put more energy into the terminal bud remaining at the top of the plant. Or you can remove the terminal bud and encourage more (but smaller) lateral flowers.

Deadheading

Remove spent flowers after blooms start to fade. This keeps the plants from wasting energy on seed production and keeps them looking neat. In some species, deadheading can encourage another flush of flowering. It also prevents perennials that reseed aggressively from spreading where you don't want them. Some of these include flowering onions, columbines,

golden marguerite, foxglove, coneflower, feverfew, Siberian iris, and balloon flower.

To attract birds to your garden, don't deadhead species with seed favored by birds, such as coneflowers and black-eyed Susans. Deadheading biennials sometimes encourages them to overwinter an additional season. As a general rule, only remove the faded blossom and stem down as far the next healthy blossom or set of leaves. With some perennials, it's best to cut back to the leaves at the bottom of the plant after they are finished flowering.

Deadleafing

Remove dead leaves to make room for new foliage. This improves the appearance and health of the plant. Dead leaves may be natural or they may be a symptom of larger problems.

Fall care

Cut back most perennials to about 3 inches from the ground. Any closer may damage crowns. Remove debris from the garden to help prevent diseases. Wait until spring to cut back some species, including European ginger, bishop's hat, ferns, Lenten rose, ornamental grasses, and upright sedums (such as 'Autumn Joy'). In addition to adding winter interest, some perennials overwinter better if left uncut. If the growing season has been dry, water deeply in fall before the ground freezes.

Winter-mulching

Many perennials benefit from a protective layer of mulch to help them overwinter -- but only if the mulch is applied correctly. Wait until after several killing frosts and the soil has cooled. If you apply winter mulch too early, it will hold warmth in the soil and some plants may break dormancy and start growing again. This wastes precious energy on new growth that will be killed by colder weather. Spreading mulch too thickly over the crowns can trap too much moisture and encourage them to rot. Remove mulch gradually when plants begin growing in spring.

Division

Many perennials begin to decline after a few years. They don't grow as vigorously as they did the first few years after planting and they flower less. The center of the clump may appear dead, with little or no growth. When this happens, it's a good sign that the plant is ready to be divided.

The best times and methods of dividing perennials varies with species. In most cases, you divide plants when they are dormant, either early in the season before they break dormancy or in fall so that the roots of the new plants can get settled in before the ground freezes.

In most instances, you dig out the entire plant, wash the soil off the roots, and cut or pull them apart into several or many pieces. Sometimes this can be quite difficult, especially with older plants and ornamental grasses, requiring the use of shovels, spading forks, or picks. Focus on preserving

requiring the use of shovels, spading forks, or picks. Focus on preserving the newer, more vigorous roots and discard older or diseased parts. Replant the divisions into a larger area than the plant once occupied, using the same spacings and soil preparation that you would use for new plantings.

Pests and Diseases

Choosing pest- and disease-resistant varieties and matching perennial species to the site -- sunlight, soil, hardiness zone etc. -- will help reduce plant health problems. Also:

- Choose only healthy plants when shopping at local nurseries and garden centers. Make sure they don't have any signs of insect damage or foliar diseases and inspect the roots to make sure they are white (not brown) and growing vigorously.
- Remove diseased plant tissue and rogue out chronically infected plants.
- Clean up and remove dead plant foliage at the end of the growing season.
- Reduce plant stress through proper watering and soil care. Improve drainage to reduce root diseases.
- Space plants farther apart to provide better air circulation if foliar diseases are a problem.
- Carefully monitor your plants for signs of insects or diseases, especially where you have large groupings of a single species.

See [How to Grow Annuals](#) for more information on some common insect pests.