



**CORNELL
COOPERATIVE
EXTENSION OF
ONEIDA COUNTY**

HOME GROWN FACTS

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HOW TO GROW ANNUALS

Annual plants complete their lifecycle in a single season. You usually plant seed in spring or early summer (or purchase plants started in a greenhouse). The plants grow and flower through summer and die in the fall. Unlike perennials, this year's plants will not regrow from overwintered roots next spring, though sometimes seeds produced by annuals will sprout and grow the following year ("self-seeding").

Annual plants have many advantages:

- Many flower from early in the season until they die in the fall, compared with perennial plants which have a comparatively short bloom time.
- Whether you grow purchased plants or start from seed, annuals are relatively inexpensive to grow. Many are easy to grow if you provide the right site and soil preparation.
- They are temporary. You can experiment with a wide range of colors, textures, and forms. If you don't like the results, you can do things differently next year.
- Annuals are great for filling in bare spaces in perennial beds. When spring bulbs die back, for example, you can fill the void with annuals. Annuals also provide season-long interest in pots and containers.
- Annuals are versatile. They range in size from bedding plants less than a foot tall to giants that grow 8 feet or more. Annual vines can climb 10 feet or more on trellises or other structures or they can ramble that distance along the ground. Many annuals perform best in direct sun and warm weather. Others prefer shade and/or cool. Some tolerate light frosts while others die at the mere hint of a freeze. Blossoms run the entire spectrum of the rainbow. Some annuals are grown for their interesting foliage colors or textures.

There are hundreds of species of annuals to choose from. Within many of these, there are also different varieties or cultivars (short for cultivated varieties) to choose from. Varieties within a species may differ in flower color, size, disease resistance, or other characteristics.

A series is a group of closely related varieties that usually differ only in flower color. Some varieties are F1 hybrids -- grown from seed from a cross between two specific parents of the same species. Hybrids are often more vigorous than non-hybrid varieties or have special characteristics. You cannot expect that plants grown from seed produced by hybrid plants to "breed true." The next generation of plants will likely be substantially different from their F1 hybrid parents.

Site and Soil

Match your plants to the amount of light your site receives. Many annuals need full sun -- six or more hours a day. Some, such as impatiens and begonias, do best in the shade.

Consider the balance between good air circulation (which helps prevent disease) and protection from strong winds (which can dry out soil and plants). Cold air accumulates in low spots on chilly spring and fall nights, encouraging frost that can kill tender annuals.

Prepare the soil ahead of time. Poor soil can stunt or kill annual flowers. Do not plant them in poorly drained areas where water pools after heavy rains. If your site has not been planted before, start improving the soil in the fall before planting annuals the following season. 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 gently sloped to keep soil from eroding.

Helping You Put Knowledge to Work

Cornell Cooperative Extension provides equal program and employment opportunities. NYS College of Agriculture and Life Sciences, NYS College of Human Ecology, and NYS College of Veterinary Medicine at Cornell University, Cooperative Extension associations, county governing bodies, and U.S. Department of Agriculture, cooperating.

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. Contact your local Extension office for information about how to test your soil to learn 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.

Caring for Annuals

Mulching

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

Watering

While some annuals are drought-tolerant, most 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.

Pinching

Some annuals 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.

Staking

Some tall annuals 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 the plants while they are still small and, as they grow, fasten the plants to the stake. Other commercial products are available to support plants.

Deadheading

Many annuals benefit from removing flowers once they begin to fade. A weekly walk through the garden deadheading spent blooms will keep many annuals flowering longer and more profusely. Some will stop blooming and die if not deadheaded. A few need to be cut back severely in midseason to encourage a new flush of growth and flowering in late summer and fall. Some annuals readily self-seed. If you want to prevent them from doing so, you need to deadhead faithfully. A few annuals, such as begonias, do not benefit from deadheading.

Fertilizing

Most annuals need fertile, well-drained soil for healthy growth. That's why it's important to incorporate organic matter when preparing beds. Some soils may also benefit from incorporating granular fertilizer before planting. (Check your soil test results to see how much you need.) Slow release sources of nitrogen applied at planting can meet nitrogen needs for the entire season. If annuals become short of nitrogen, often indicated by yellowing of younger leaves, you can side dress granular fertilizer or apply liquid fertilizer.

Pests and Diseases

Since annuals die after only a single season, diseases are less of a concern than with perennials. Often, it's best to just pull out and dispose of individual plants that become diseased. Not growing the same species in the same place in consecutive years can help. If diseases persist, try using resistant varieties.

If foliar diseases such as powdery mildew are a problem, provide better air circulation by spacing plants farther apart. Keep foliage dry as much as possible by watering in the morning. If root rots and diseases are a problem, avoid over-watering and improve drainage.

Damping off is probably the most serious disease of annuals, causing seeds to rot and small seedlings to die. It spreads quickly and can be carried on soil, tools, and containers. Use sterile soil and containers to prevent its spread when starting seeds.

In a diverse and healthy garden, beneficial insects prey on and parasitize pests, helping to keep their populations in check. Keep in mind that when you use insecticides, you also kill the good guys that prey on the pests. If you use insecticides, follow directions precisely.

Where aphids and other pests that suck plant fluids (below) are a problem, avoid excessive nitrogen fertilizer. This makes plants more attractive to these insects. Also look for resistant varieties. A few of the common sucking pests you may encounter include:

Aphids

Tiny, soft-bodied insects (often pear-shaped) that pierce tender plant parts and suck out fluids. Sooty mold (a black fungus) often grows on the sweet sticky honeydew associated with aphid colonies. You can wash aphids off plants with a hard stream of water.

Whiteflies

Adults are small and yellowish with dull white wings. Immature whiteflies are oval, flattened, and yellowish scale-like insects. Heavily infested plants send up a cloud of adults when disturbed. Do not purchase infested plants. Pull out and dispose of plants that become infested.

Spider Mites

These tiny 8-legged arthropods suck liquid from plants, causing yellowish stippling on leaves. Webbing, which looks like strands of spider's web, is sometimes visible. Rogue infested plants. Wash off with hard stream of water.

Slugs and Snails

Slugs and snails can also be a problem, especially in wet years. Removing mulch and other garden debris can reduce the moist hiding places they need during the day.

This publication may contain pesticide recommendations. Changes in pesticide regulations occur constantly, some materials mentioned may no longer be available, and some uses may no longer be legal. All pesticides distributed, sold, and/or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension Specialist or your regional DEC office. **READ THE LABEL BEFORE APPLYING ANY PESTICIDE.**

Updated 2008