

Horticulture Diagnostic Laboratory



Cornell University
Cooperative Extension
of Suffolk County
www.ccesuffolk.org

Extension Education Center
423 Griffing Ave, Ste 100
Riverhead, NY 11901-3071
631-727-4126

Bayard Cutting Arboretum
Montauk Hwy
Great River, NY 11739
631-581-4223



Perennials

Perennials are a large group of herbaceous plants whose roots live on from year to year but whose stems die down to the ground with the advent of winter. Their numbers are many. Perennials may be found for nearly all locations because they vary so much in habit of growth, season of flowering, color of blooms and foliage, form and texture of individual plants and adaptability to soil and climatic conditions.

Herbaceous perennials could be used as the dependable border plants that keep our gardens colorful year after year, coming up from the same root system with persistent regularity and minimal care. Herbaceous perennials could be planted as “island beds,” placing informal, irregularly shaped perennial flowerbeds in the middle of lawn areas. Their placement in the lawn must be thoroughly conceived so that vistas, focal points and scale are preserved. When used properly, perennials have a pleasant way of blending themselves with the landscape and a natural appearance. Besides, perennials can supply abundant cut flowers and provide materials needed for dried flower arrangements.

Soil Preparation for Perennials

All gardening except hydroponics begins with the soil, and since most perennials are to be in place for a number of years, good preparation pays really high dividends. Traditionally, authorities stress the desirability of double digging. But few gardeners who have prepared a border by this sadistic method have the inclination, or strength of back, to do a second one the same way. Double digging, which is essentially the excavation and rearrangement (with amendments) of two thick layers of soil, does indeed give excellent results, particularly with deep-rooted kinds of perennials, but it passed from the scene with the estate gardener.

Today, fortunately, there is the rototiller, which can be rented for a Saturday morning, and results with it are quite satisfactory, considering the alternatives. True, it is not feasible to turn over the soil more than eight or ten inches deep with a rototiller, but this is sufficient for most perennials. More important is the thorough incorporation of organic matter (compost, well-rotted manure, or peat moss) into the upper 6-8 inches of soil. Incorporating a 2 - 4” layer of organic matter would be adequate. A soil pH test will indicate if limestone is

needed and how much. Contact Cornell Cooperative Extension – Suffolk County for information on having the soil tested. A soil nutrient test should be used to determine the need for additional phosphorus. If test results are not available 3 - 5 lbs. of superphosphate (0-20-0) or bone meal per 100-sq. ft. can be incorporated into the upper 6-8 inches of soil before planting. Improving soil conditions with these amendments before planting helps to build up the soil, providing good structure and good drainage, which is essential for most perennials.

Certain times of the year are better than others for digging a border, autumn being the very best. In this way the various materials have a chance to “mellow” over winter before planting. Established beds can profit from a surface application of fertilizer in early spring.

Can't prepare a border in autumn? This is no reason for not doing it at all! The task can be accomplished almost any time of year when the soil is neither soggy nor frozen. First-year performance may not be quite as lush.

Although the procedure discussed above for preparing the perennial garden may seem very tedious and time consuming, the results will outweigh the initial work involved.

Propagate Your Own Perennials

Perennials that do not transplant well are usually sown directly in the garden. Perennials can be started for flowering the next year any time from early spring up to the middle of July. To keep perennials vigorous, they should be divided periodically, discarding the older center growth and replanting only the strong growth from the outer edge of the clump. An easy way to divide a plant is to lift it, then insert two spading forks back to back into the clump and bring the fork handles together, prying the clumps apart.

A rhizome, unlike a root, is an underground stem. It bears roots but also has prominent leaf buds or eyes. Many perennials produce rhizomes; for example, *Achimenes* sp., *Helleborus* sp., *Hosta* sp., *Iris* sp., *Primula sieboldii*, Solomon's seal and water lilies. They are best propagated by taking pieces that bear one or two eyes.

A good rule to follow is to divide fall-flowering plants in the spring, and spring-flowering plants in the fall.

Helenium sp., *Monarda* sp. and *Oenothera* sp. should be divided every two or three years. Plants, such as *Phlox* sp., *Iris* sp., *Hemerocallis* sp., *Physostegia* sp. and *Astilbe* sp., should be divided only every three or four years.

Stem cuttings are frequently used for propagating perennials. Cuttings two to three inches long are taken in early or mid-morning from turgid plants. They are dipped in a root-promoting hormone and inserted into the rooting medium. Any type of container with adequate drainage holes at the bottom could be used for cuttings. The cuttings may be kept out-of-doors in a shady, protected spot where they can be kept moist. Rooting will occur in late winter in a greenhouse or in early spring in a cold frame or ground bed. After top growth extends several inches, the plants can be set into permanent garden locations. It is best to take cuttings in midsummer from spring-blooming plants and in late spring to get cuttings from summer- and autumn-flowering plants.

Tuber or tuberous root cuttings are often performed on some popular perennials. Certain plants develop thickened portions of their stems, called tubers, beneath the soil. When tubers are sliced with "eyes" on them, new plants will form. Jerusalem artichoke and *Begonia evansiana* are good examples.

Tuberous roots differ from tubers in that they have no eyes from which growth may start. The eyes are at the base of the old flowering stems. Dahlia, tuberous begonia, and *Hemerocallis dumortieri* are examples. Eyes must be attached to divided tuberous roots.

Roots of certain plants will easily form when a branch is bent down and a part covered with earth. This can be encouraged by covering parts of stems with soil to produce new plants.

It is an enjoyable, intriguing and gratifying experience to propagate perennials on your own. It requires no elaborate or expensive equipment. It is easy to propagate perennials when you know how.

Easy-To-Care-For Perennials

Achillea sp. (yarrow) - Long period of bloom, varying heights (18-36") and colors (white, yellow, reds, and pink) depending upon species and variety; fern-like pungent foliage; excellent for cutting and drying; prefers poor, dry soils in full sun.

Aster sp. - Great color variation for late-season bloom; Sturdy 3-5" plants for the background, 12-15" plants for the front border. Requires full sun.

Astilbe sp. - Feathery pyramidal flower spikes that stand 1 to 2-½ feet above clumps of rich green dissected foliage; blooms range from white to pink, red, and purple during June and July; requires deep rich soil,

preferably in shade. If grown in sun, will not tolerate drought.

Epimedium sp. - A slow growing ground cover or for edging; light green heart-shaped leaves appear rose-tinted in spring and change to crimson in fall; numerous delicate blooms appear in spring as the leaves unfold; does well in sun or shade and never needs division.

Hemerocallis sp. (daylily) - One of the easiest and most satisfactory perennials for sun or part shade; with proper selection of cultivars, continuous succession of bloom is possible from May to October; an incredible array of colors and size of blooms (3-8").

Hosta sp. (plantain-lily) - Grown primarily for their interesting foliage; white or lavender flowers in summer provide additional interest; best appreciated when grown singly as a specimen, but also appropriate as a ground cover in shade or sun.

Iris kaempferi (Japanese iris) and *I. sibirica* (Siberian iris) - Both species have finer upright foliage, more reasonably sized clumps, and are less demanding than the bearded types. The former with 6-8" flat-topped blooms comes in shades of white, blue, and rose. The latter, in white and shades of blue and purple, comes before Japanese iris but after the bearded ones; both species tolerate part shade but prefer full sun, as well as rich, moist, and slightly acid soils.

Liriope sp. (lily-turf) - Semi-evergreen clumps of green or variegated grasslike foliage 10-15" tall for sun or shade; grow as a grouping of 3-5 plants in a border, as an edging, or slow growing ground cover; narrow spike-like flowers in white, blue, or lilac appear in summer.

Sedum spectabile - This indestructible species forms a compact mound about 18" high and produces numerous flat-topped flower clusters in shades of pink or carmine from late summer to frost; grow as single specimens or groups of 3 in the border, rock garden, or container; requires a well-drained soil in full sun.

Veronica sp. (speedwell) - With proper selection of different varieties, a succession of bloom can last from June through September, heights can vary from 6-24", and colors from blue and purple to pink and white; flowers are borne on densely numerous erect spikes that are excellent for cutting; an open sunny location with a well-drained soil is preferred.

Select Perennials worth Locating

Alchemilla vulgaris (Lady's Mantle)

Anemone x hybrida (Japanese Anemone)

Aruncus sp. (Goats-Beard)

Baptisia sp. (False Indigo)

Cimicifuga sp. (Snakeroot)

Dictamnus sp. (Gas Plant)

Geranium sp. (Cranesbill)

Hibiscus sp. (Hardy Hibiscus)

Linum sp. (Flax)

Oenothera tetragona (Common Sundrop)

Recommended Books & Booklets On Perennials

Armitage, A. "Herbaceous Perennial Plants – A Treatise on Their Identification, Culture, and Garden Attributes", 2nd edition, Stipes Publishing, L.L.C., 1997.

Bloom, Alan, "Perennials in Island Beds", Faber and Faber, 1977.

Bloom, Alan, "Perennials for Your Garden", Floralprint, Ltd., 1979.

Brickell, C. and Zuk, J. "The American Horticultural Society A-Z Encyclopedia of Garden Plants", DK Publishing, 1997.

Brooklyn Botanic Garden Handbook, "Perennials and their Uses" Brooklyn Botanic Garden, 1978.

Bush-brown, James and Louise, America's Garden Book, 1980. Scribners.

Clausen, Ruth R. and Ekstrom, N. H. "Perennials for American Gardens: the definitive A-Z Reference Guide to over 3,000 species, cultivars and hybrids for gardeners across the country". 1989

Cohen, Stephanie, "The Perennial Gardener's Design Primer – the Essential Guide to Creating Simply Sensational Gardens", Storey Publishing, 2005.

DeWolf, G. W., Scheid, D, Still, S. and K. Widin. "Taylor's Guide to Perennials", Houghton Mifflin Company, 1987.

Harper, P., McGourty, M. A., "Perennials – How to Select, Grow and Enjoy", HP Books, Inc., 1985.

Hebb, Robert, "Low-Maintenance Perennials", Quardrangle/The New Your Times Book Co., 1975.

Hill, Lewis and Nancy, "Successful Perennial Gardening – A practical guide", Storey Publishing, 1988.

Hodgson, Larry, "Perennials for Every Purpose", Rodale, Emmaus, PA. 2000.

Ruggiero, M., "Perennial Gardening". Pantheon Books, Knopf, NYC, NY. 1994.

Still, Steven, "Herbaceous Ornamental Plants", Stipes Publishing Company, 1982.

By the editors of Time-Life Book (plus Still, S. and Viette, A.) 1995, "Perennials - The Time-Life Complete Gardener", Time-Life Books, Alexandria, VA 168 pp.

Thomas, Graham Stuart, "Perennial Garden Plants," Capability's Books for Gardeners, 1982.

Woods, Christopher, "Encyclopedia of Perennials – a Gardener's Guide", Facts of File, 1992.

Wyman, Donald, "Wyman's Gardening with Perennials", MacMillan Publishing Co., 1977

CK/TK Revised 04/18/07

AW 2/2012