



## Brooklyn Queens Land Trust

### Perennial Flowers

#### How to Select/ Where to Plant

The term perennial is frequently used by gardeners to refer to herbaceous (non-woody) perennial flowers. Most herbaceous perennials grow and flower for several years. Some perennials are short-lived -- surviving for only three or four years. In the fall, the tops of herbaceous perennials (leaves, stems, and flowers) die down to the ground while the root system persists through the winter. In the spring, the plant grows new leaves from its crown or roots. Plants that grow from bulbs and bulb-like structures are also herbaceous perennials but are often classified separately as flowering bulbs.

An advantage of perennials is that they do not have to be planted every year. Many perennials only flower for a few weeks each year, however, with careful planning you can have some perennials in bloom most of the season. Some consideration should be given to how a plant looks when it is not in bloom. Perennials with colorful or interesting foliage can provide interest even when they are not in bloom. Annuals can be combined with perennials to produce a continuous colorful show.

#### Where Should I Put It?

Site selection is very important for perennials. First, if purchasing them, it can prove to be an expensive endeavor. It is also important to remember, some plants do not like to be moved. Perennials generally live for several years, if properly cared for and placed in a hospitable environment. When choosing a spot, choose carefully. Consider: sunlight ( sun or shade); slope of the land; soil type; moisture requirements; drainage; and what role you want the plants to fill in the garden. With perennials, this is a major point since they're usually left in the same place for years or indefinitely. Shaded sites additionally pose the problem of competing with tree roots for moisture. Remember, no matter how excellent a job done of preparing the site, tree roots tend to grow back!

If possible, select a site that without a weed problem. Be on the lookout for hard-to-control weeds like bermuda grass and nutsedge. A site was a garden previously and was cultivated for several years might have fewer weeds. It is easy to cover the site with clear or dark plastic the summer before planting to kill off many existing weeds and weed

seedlings, a process known as *soil solarization*.

Many perennials need a well-drained soil. While plants will tolerate a wet site for a short period of time, most will be killed by extended periods of "wet feet". Avoid locating the perennial border in low lying areas that are subject to standing water. Incorporate a 3- to 4-inch layer of organic matter, such as pine bark mulch or compost, before planting.

Soil pH requirements vary among perennials but most prefer a pH between 5.5 and 6.5. Lime can be applied individually to those that need a higher pH. Fertilize according to a soil test or incorporate 5 pounds of 5-10-10 per 100 square feet before planting.

### Selecting Plants

Observe the bloom period for perennials in your neighborhood. Choose plants that will bloom together as well as those that will be showy when little else is in bloom. To obtain details on particular plants, consult plant societies, specialty books, nurseries, and local botanical gardens.

Gardeners often seek that "perfect" herbaceous (non-woody) perennial plant to fill a special location or need in the landscape. Listed below are some perennial plants useful for special purposes based on the growing conditions and experiences in Rhode Island. Your experience with the plant may vary somewhat. Of course, this list is not all-inclusive--use it as a guide and then plan some further research on your own.

Sometimes many plants in a genus will fit the category given and are listed as "Hosta spp.," for instance. Do more research to narrow your selection within the genus. Occasionally, a specific cultivar is listed (in single quotes), indicating that the particular plant is the best choice within the species. The Latin name and a common name are given for most listings.

### **Drought Sun-loving Plants**

Achillea spp.-Achillea or Yarrow  
Anthemis tinctoria-Golden Marguerite  
Arabis caucasica-Rock Cress  
Armeria maritima-Common or Sea Thrift  
Artemisia spp.-Artemisia  
Asclepias tuberosa-Butterfly Weed  
Catananche caerulea-Cupid's Dart  
Coreopsis spp.-Coreopsis  
Echinops ritro-Small Globe Thistle  
Euphorbia spp.-Spurge  
Gaillardia spp.-Blanket Flower  
Helianthus x multiflorus-Perennial Sunflower  
Hemerocallis hybrids-Daylily  
Lavandula angustifolia-English Lavender  
Liatris spp.-Gayfeather  
Malva alcea-Hollyhock Mallow  
Oenothera spp.-Sundrops  
Perovskia atriplicifolia-Russian Sage

Polygonum cuspidatum var. compactum-Fleeceflower  
Rudbeckia spp.-Black-eyed Susan  
Sedum 'Autumn Joy'-Showy Stonecrop or Live-Forever  
Sempervivum tectorum-Hens & Chickens  
Stachys byzantina-Lamb's Ear  
Yucca filimentosa-Yucca

### **Moisture-Loving Plants**

Aruncus dioicus-Goat's Beard  
Astilbe x arendsii-Astilbe  
Campanula glomerata-Clustered Bellflower  
Cimicifuga racemosa-Black Snakeroot  
Dicentra spp.-Bleeding Heart  
Houttuynia cordata 'Variegata'-Houttuynia  
Iris ensata-Japanese Iris  
Ligularia spp.-Ligularia  
Lobelia cardinalis-Cardinal Flower  
Lysimachia clethroides-Gooseneck Loosestrife  
Lysimachia punctata-Yellow Loosestrife  
Matteuccia pensylvanica-Ostrich fern  
Physostegia virginiana-Obedient Plant  
Rodgersia pinnata-Featherleaf Rodgersflower  
Tradescantia x andersoniana-Virginia Spiderwort  
Trollis europaeus-Globeflower

### **Full Shade Plants**

Ajuga reptans-Bugleweed  
Arum italicum 'Pictum'-Painted Arum  
Asarum spp.-Wild Gingers  
Convallaria majalis-Lily-of-the-Valley  
Dodecatheon media-Common Shooting Star  
Galium odoratum-Sweet Woodruff  
Helleborus orientalis-Lenten Rose  
Hosta spp.-Hosta  
Lamium maculatum-Spotted Deadnettle  
Liriope spicata-Creeping Lilyturf  
Mertensia virginica-Virginia Bluebells  
Osmunda regalis-Royal Fern  
Polygonatum biflorum-Small Solomon's Seal  
Polygonatum commutatum-Great Solomon's Seal  
Pulmonaria angustifolia-Blue Lungwort  
Pulmonaria saccharata-Bethlehem Sage  
Tiarella cordifolia-Foam Flower  
Tradescantia x andersoniana-Virginia Spiderwort  
Viola odorata-Sweet Violet

### **Partial Shade Plants**

Alchemilla mollis-Lady's Mantle  
Anemone x hybrida-Japanese Anemone  
Aquilegia spp.-Columbine  
Astilbe spp.-Astilbe  
Bergenia cordifolia-Heartleaf Bergenia

Brunnera macrophylla-Siberian Bugloss  
Ceratostigma plumbaginoides-Plumbago  
Dicentra spp.-Bleeding Heart  
Doronicum cordatum-Leopardsbane  
Geranium spp.-Cranesbill or Hardy Geranium  
Heuchera sanguinea-Coralbells  
Myosotis sylvatica-Garden Forget-me-not  
Tricyrtis hirta-Toadlily

### **Plants for Long Bloom Season**

Achillea 'Moonshine'-Moonshine Yarrow  
Asclepias tuberosa-Butterfly Weed  
Coreopsis lanceolata-Coreopsis  
Coreopsis verticillata 'Moonbeam'  
Dicentra eximia-Fringed Bleeding Heart  
Echinacea purpurea-Purple Coneflower  
Gaillardia x grandiflora-Blanket Flower  
Rudbeckia fulgida 'Goldsturm'-Black-eyed Susan  
Salvia x superba-Perennial Salvia  
Scabiosa spp.-Pincushion Flower  
Sedum 'Autumn Joy'-Showy Stonecrop or Live-Forever  
Veronica spicata 'Sunny Border Blue'-Spike Speedwell

### **Fragrant Flowers**

Arabis caucasica-Rock Cress  
Convallaria majalis-Lily-of-the-Valley  
Dianthus plumarius-Cottage Pinks  
Dictamnus albus-Gas Plant  
Hosta plantaginea-Fragrant Plantain Lily  
Iris hybrids-Iris  
Lavandula angustifolia-English Lavender  
Paeonia lactiflora-Peony  
Viola odorata-Sweet Violet

### **Flowers for Cutting**

Achillea spp.-Achillea or Yarrow  
Aconitum napellus-Garden Monkshood  
Alchemilla mollis-Lady's Mantle  
Anemone x hybrida-Japanese Anemone  
Aquilegia spp.-Columbine  
Armeria maritima-Common or Sea Thrift  
Astrantia major-Great Masterwort  
Campanula persicifolia-Peach-leaved Bellflower  
Chrysanthemum x superbum-Shasta Daisy  
Convallaria majalus-Lily-of-the-Valley  
Coreopsis spp.-Coreopsis  
Delphinium elatum-Delphinium or Larkspur  
Dicentra spp.-Bleeding Heart  
Echinacea purpurea-Purple Coneflower  
Echinops ritro-Small Globe Thistle  
Gaillardia spp.-Blanket Flower  
Gypsophila paniculata-Baby's Breath

Heliopsis helianthoides-Sunflower Heliopsis  
Heuchera sanguinea-Coralbells  
Lavandula angustifolia-English Lavender  
Liatris spp.-Gayfeather  
Lilium spp.-Hardy Lilies  
Lupinus 'Russell Hybrid'-Russel Hybrid Lupine  
Paeonia hybrids-Peony  
Penstemon spp.-Beardtongue  
Platycodon grandiflorus-Balloon Flower  
Rudbeckia spp.-Black-eyed Susan  
Scabiosa spp.-Pincushion Flower  
Stokesia laevis-Stokes Aster  
Veronica spicata-Spike Speedwell

### **Plants for Dried Flower or Fruit Use**

Achillea spp.-Achillea or Yarrow  
Alchemilla mollis-Lady's Mantle  
Asclepias tuberosa-Butterfly Weed  
Baptisia australis-False Indigo  
Catananche caerulea-Cupid's Dart  
Echinops ritro-Small Globe Thistle  
Gypsophilia paniculata-Baby's Breath  
Iris siberica-Siberian Iris (seed pod)  
Lavandula angustifolia-English Lavender  
Liatris spp.-Gayfeather  
Limonium latifolium-Statice  
Papaver orientale-Oriental Poppy (seed pod)  
Scabiosa spp.-Pincushion Flower

### **Attractive to Butterflies**

Achillea spp.-Achillea or Yarrow  
Armeria maritima-Common or Sea Thrift  
Aruncus dioicus-Goat's Beard  
Asclepias tuberosa-Butterfly Weed  
Aubrieta deltoidea-False Rock Cress  
Chrysanthemum spp.-Mums  
Coreopsis spp.-Coreopsis  
Dictamnus albus-Gas Plant  
Echinacea purpurea-Purple Coneflower  
Gaillardia spp.-Blanket Flower  
Lavandula angustifolia-English Lavender  
Liatris spp.-Gayfeather  
Monarda didyma-Bee Balm  
Phlox paniculata-Summer Phlox  
Rudbeckia spp.-Black-Eyed Susan  
Sedum 'Autumn Joy'-Showy Stonecrop or Live-Forever

### **Attractive to Hummingbirds**

Alcea rosea-Hollyhock  
Aquilegia spp.-Columbine  
Asclepias tuberosa-Butterfly Weed

Dianthus spp.-Cottage Pinks  
Dicentra spp.-Bleeding Heart  
Digitalis spp.-Foxglove  
Hemerocallis spp.-Daylily  
Heuchera sanguinea-Coralbells  
Lobelia cardinalis-Cardinal Flower  
Monarda didyma-Bee Balm  
Penstemon spp.-Beardtongue

Adapted from Jane C. Martin, Ohio State University Extension, 2000; BBC; Cornell Cooperative Extension; Farmer's Almanac; and Reader's Digest Gardening

### **Propagation/Transplanting**

#### Starting Plants from Seeds

If you plant seeds, some off-types of color, flower form, and plant habit can be expected. Perennials seeded in the garden frequently fail to germinate properly because the surface of the soil crusts and prevents entry of water. To avoid this, sow the seed in vermiculite-filled furrows. While you can sow perennial seeds directly in beds where they are to flower it is usually best to start plants indoors or in a cold frame and set them outdoors after the weather warms. An alternative to spring seeding is to sow seeds in flats or seedling beds during the summer for fall transplanting. Perennials started in spring frequently will not flower their first year.

#### Dividing

Many perennials will need dividing after three years. Some perennials are best left in place and not divided; examples include: baby's breath, blue wild indigo, gas plant, goat's beard, globe thistle, and sea holly.

The best time to divide most perennials is in the spring when new shoots are 2 to 3 inches tall, or in the fall when the foliage starts to die back. Plants divided during an active growth period in the summer are slower to become reestablished. Some perennials can be divided following their flowering period even during the summer, examples include daylily and bearded iris. Division is normally done by digging and dividing the clump into several smaller clumps. An alternative for vigorous clumps is to slice off a section with a sharp spade while leaving the main clump in the ground.

Some perennials (chrysanthemums, bearded iris) exhibit a decline in vigor as a clump grows. Transplants from the clump's center often grow poorly and bloom sparsely. To divide mature clumps, select only the vigorous outer edges of the clump and discard plants from the center. Divide the plant into clumps of three to five shoots each. Do not put all the divisions back into the same space that contained the original plant --- that would place too many plants in a given area. Exchange extra plants with a friend, plant them elsewhere in the yard, or discard them.

## **Transplanting**

Bare root plants are normally transplanted in early spring. Container grown plants can be transplanted any time of the year but plants set out during hot, dry weather will require more attention in order to survive. Late summer or fall-flowering container grown perennials are normally planted in the spring, while spring-flowering perennials are planted in late summer or early fall. Regardless of the time of planting, perennials should be allowed sufficient time to establish themselves before flowering or before the onset of cold or hot, dry weather. Many gardeners prefer fall planting since the plants will develop an extensive root system before new foliage growth occurs.

The ideal weather to transplant is when it is cool and overcast. Avoid planting during hot or windy periods or provide some shading after planting. Soak bare root plants in water for about a half hour before planting. Water container grown plants before removing them from their container. Turn the pot upside down and slide the root ball out. Roots may have difficulty growing into the surrounding soil unless the roots and soil mixture are cut, loosened, and spread out. Fill the hole and firm the soil lightly around the plant. Be sure the crown is at the soil line.

Drench the soil around the planting hole with a liquid fertilizer (16-12-10 or 20-20-20 mixed 1 tablespoon per gallon of water) to stimulate root growth. Check reference books to determine optimum spacing between plants. After planting, apply a 2- to 3-inch layer of mulch without covering the crown. Plants will need to be watered frequently after transplanting until new roots are produced into the surrounding soil.

## **Maintaining/Winter Protection**

### **Mulching**

Mulching gives an orderly look to the garden, cuts down on weeding, and helps maintain uniform soil moisture. Organic mulches add some nutrients and humus to the soil as they decompose and improve soil tilth and moisture holding capacity. Most organic mulches should be applied after plants are well established and when there is reasonably good soil moisture. Pine bark nuggets, pine needles, compost, and shredded leaves are commonly used organic mulches for perennial beds. A 2- to 3-inch layer of mulch is applied at planting. Additional mulch is added in early spring to maintain the desired mulch depth. A word of caution --- heavy mulches that hold moisture can be detrimental, particularly to plants subject to crown rot.

### **Watering**

Soil type, plant species as well as growth stage and temperature influence watering frequency. Plants grown in a clay soil that has been properly watered may need to be watered only once a week. Plants grown in a sandy soil may need watering several times a

week. Water requirements will vary with the time of year, amount of sunlight or shade, plant growth, and other environmental factors. Most plants need 1 inch of water per week, but may require more when flowering or when exposed to high temperatures or windy conditions. After watering, allow the soil to dry moderately before watering again.

A soaker hose is excellent for watering. Water seeps directly into the soil without wetting the leaves and flowers. Sprinklers wet the flowers and foliage and makes the plant more susceptible to diseases.

### **Weed Control**

Mulch and proper plant spacing are the best ways to minimize weed problems. A preemergence herbicide can be used to control many weeds. Some preemergence herbicides are applied before planting, others are applied after planting but before weeds emerge. Any herbicide used in flowerbeds must be chosen carefully. Read the label: no one herbicide can be used safely on all flowers. Herbicides that are labeled for some but not all flowers include: Betasan, Surflan, and Treflan. Time and rate of application will vary with the herbicide selected. The bed should be weed-free when the preemergence herbicide is applied. Only a few postemergence herbicides can be used to control grassy weeds after flowers have become established. Some weeds will still need to be pulled by hand -- weeds are easier to pull after a rain or irrigation.

### **Fertilizing**

Most perennials are not heavy feeders. A light fertilization of 2 to 3 pounds of 5-10-10 or 10-10-10 per 100 square feet should be applied in early spring. A second application is often made in mid-summer at the rate of 1 1/2 to 2 pounds per 100 square feet. Take into consideration the amount of plant growth -- if growth is adequate you may not need to fertilize. Too much fertilizer will promote foliage and possibly diseases without necessarily promoting flower production. It is not necessary to remove the mulch before fertilizing. Water after applying fertilizer; this will wash fertilizer off the foliage, prevent foliage burn, and will make the fertilizer available more quickly.

### **Deadheading**

After perennials have bloomed, spent flowers and seed pods should be removed. Keep in mind that some perennials do not require deadheading since the seed pods are either not very visible or are quite attractive. Cut the flower stem down to a healthy leaf or side branch. This will keep the plants looking neater and will prevent them from wasting energy by producing seeds. Some plants produce so many seeds and volunteer plants that they become overcrowded and invasive. Deadheading will reduce the problem. Some perennials will rebloom if cut back after the first flush of flowers.

### **Pinching**

Some plants will grow thicker and fuller if the terminal growth is pinched. This reduces the height and reduces the likelihood that

the plant will be blown over by wind and rain or from the weight of large, heavy flowers. The result is a more compact plant with more but sometimes smaller flowers. Pinching often delays flowering. Plants that respond to pinching include chrysanthemums, asters, and phlox. Start pinching in early spring when the shoots are several inches long and discontinue by early July.

Perennials can be classified based on their hardiness. Hardy-perennials will normally survive the winter with little or no protection. Hardy does not, however, refer to the ability of the plant to withstand heat and drought. Tender or half-hardy perennials will survive a mild winter but may not survive a severe winter without protection.

In colder parts of the country perennial beds are often mulched to provide winter protection. For most areas of North Carolina this is not necessary. Many gardeners prefer to leave the dead foliage as a form of winter protection, however, old foliage can harbor disease and insect problems. If left over the winter, the dead foliage should be removed quite early in the spring.

A mulch should be applied to plants that are growing at the upper limits of their normal growing area. The purpose of the mulch is to help the plants remain dormant. Apply mulch only after the soil temperature has decreased following several killing frosts. If a winter mulch is applied too early, the warmth from the protected soil could cause growth to continue and become more subject to winter injury. Be careful not to pile mulch heavily over the crowns, as this would encourage rotting. Remove the winter mulch from the crown as soon as growth starts in the spring.

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