

## Dividing Perennials

The three main reasons for dividing perennials are to control the size of the plants, to help rejuvenate them, and to increase their number. Dividing and replanting keeps rapidly spreading perennials under control. Dividing will rejuvenate old plants, keeping them vigorous and blooming freely. Dividing perennials is an easy and inexpensive way to gain additional plants for your garden or to share.

### When to Divide

In general, it is best to divide spring and summer blooming perennials in the fall, and fall bloomers in spring. By dividing the plant when it is not flowering, all the plant's energy can go to root and leaf growth.

Fall division should take place between early September in the uppermost Piedmont and mid-to late October on the coast. Allow at least four to six weeks before the ground freezes for the plants to become established.

If you divide in the spring, allow enough time for roots to settle in before hot weather. Spring division is ideally done in the early spring as soon as the growing tips of the plant have emerged. Spring divided perennials often bloom a little later than usual.

Never divide perennials on hot, sunny days. Wait until a cloudy day, ideally with several days of light rain in the forecast.

Most perennials should be divided every three to five years. Some perennials such as chrysanthemums and asters may need to be divided every one or two years or they will crowd themselves into non-flowering clumps of leaves and roots. Bleeding hearts and peonies may never need

to be divided unless you want to increase your stock.

Signs that perennials need dividing are flowers that are smaller than normal, centers of the clumps that are hollow and dead, or when the bottom foliage is sparse and poor. Plants that are growing and blooming well should be left alone unless more plants are wanted.

### Prepare to Divide Ahead of Time

Water plants to be divided thoroughly a day or two before you plan to divide them. Prepare the area that you plan to put your new divisions in before you lift the parent plant.

Prune the stems and foliage to 6 inches from the ground in order to ease division and to cut down on moisture loss.

### Lift the Parent Plant

Use a sharp pointed shovel or spading fork to dig down deep on all four sides of the plant, about 4 to 6 inches away from the plant. Pry underneath with your tool and lift the whole clump to be divided. If the plant is very large and heavy, you may need to cut it into several pieces in place with your shovel before lifting it.

### Separate the Plant

Shake or hose off loose soil and remove dead leaves and stems. This will help loosen tangled root balls and make it easier to see what you are doing.

Perennials have several different types of root systems. Each of these needs to be treated a bit differently.

## Spreading Root Systems

Spreading root systems have many slender matted roots that originate from many locations with no distinct pattern. Plants with spreading root systems include asters, bee balm, lamb's ear, purple cornflowers and many other common perennials. These can crowd out their own centers. Some can be invasive unless divided frequently. They can usually be pulled apart by hand, or cut apart with shears or knife.

Large, vigorous plants with thickly intertwined roots may need forceful separation with digging forks. Put two forks back to back in the center of the plant and use them to pry the pieces apart.

Divide the plants into clumps of three to five vigorous shoots each. Small or weak and woody divisions should be discarded. Discard the center of the clump if it is weaker than the outside edges.

## Clumping Root Systems

The clumping root systems originate from a central clump with multiple growing points. Many have thick fleshy crowns. Image depicts the use of a heavy, sharp knife being used to pry apart thick fleshy crowns. This group includes astilbes, hostas, daylilies and many ornamental grasses.

It is often necessary to cut through the thick fleshy crowns (the central growing area between the roots and the leaves and stems of the plant) with a heavy, sharp knife. You can also pry apart these roots with back to back digging forks.

Keep at least one developing eye or bud with each division. If larger plants are wanted, keep several eyes.

## Rhizome Division

Rhizomes are stems that grow horizontally at or above the soil level. Bearded irises are the most common perennial with this type of root system. Image depicts where to cut rhizomes during division. Divide irises any time between a month after flowering until early fall.

Cut and discard the rhizome sections that are one year or older. Also, inspect rhizomes for disease and insect damage. Damaged rhizomes should be trimmed and treated, or discarded if too badly damaged.

Iris divisions should retain a few inches of rhizome and one fan of leaves, trimmed back halfway. Replant with the top of the rhizome just showing above soil level.

## Tuberous Roots

Dahlias are an example of perennials with tuberous roots. The tubers should be cut apart with a sharp knife. Every division must have a piece of the original stem and a growth bud attached. After division they can either be replanted or stored for spring planting.

## Dividing Large, Tough Roots

If the root mass is very large, or tight and tangled, you can raise the clump 1 to 2 feet off the ground and drop it. This should loosen the root mass, and you can pull the individual plants apart. This is not a good method for plants with brittle roots such as peonies.

Plants that have very tough, vigorous root systems (agapanthus, red-hot poker and ornamental grasses) may have to be divided with a shovel, saw or ax. You can also vigorously hose off soil to make the root system easier to work with.

## Don't Divide These Perennials

Some plants resent being divided and it should be avoided if possible. These include butterfly weed (*Asclepias*), euphorbias, oriental poppies, baby's breath (*Gypsophila*), gas plant (*Dictamnus albus*), Japanese anemones, false indigo (*Baptisia*) and columbines (*Aquilegia*).

Lenten and Christmas roses (*Helleborus*) are very difficult to move when more than a few years old. Usually you can find tiny seedlings around the base. These are easy to move.

Lavender cotton (*Santolina chamaecyparissus*) and several other perennials are actually small woody shrubs and should not be divided. These include perennial candytuft (*Iberis sempervirens*), lavender, rosemary, southernwood (*Artemisia abrotanum*), and several other artemesias. These plants often have rooted layers (branches that have developed roots while touching the soil). The layers can be cut off the parent plant, dug up and replanted as though they were divisions.

## Plant the Divisions

Never allow divisions to dry out. Keep a pail of water nearby to moisten divisions until they are planted. Trim all broken roots with a sharp knife or pruners before replanting.

Plant the divided sections immediately in the garden or in containers. Replant divisions at the same depth

they were originally. Firm soil around the roots to eliminate air pockets. Water well after planting.

Fall-divided perennials should be mulched in the upstate the first winter to prevent heaving caused by alternating shallow freezing and thawing of the soil. The best winter mulch is loose and open such as pine straw, Christmas tree limbs or leaves.

## When and How to Divide Some Common Perennials

Common Name Botanical Name	How Often To Divide Season To Divide	Method Of Division
Asters ( <i>Aster</i> )	Every year or two to control spread and maintain vigor. Spring	Spreading root division. Replant outer growth and discard the centers of older plants.
Astilbe ( <i>Astilbe</i> )	Every 2 to 3 years as plants become crowded. Early Spring or fall.	Spreading root division. Needs division for best bloom.
<a href="#">Bearded Iris</a> ( <i>Iris</i> )	Every year or two to control spread and maintain vigor. Spring	Rhizome root division.
Beebalm ( <i>Monarda</i> )	Every 3 years to control rampant growth. Spring or fall.	Spreading root division.
Bellflower ( <i>Campanula</i> )	Every 2 to 3 years or as the plant becomes crowded. Spring or early fall.	Spreading root division.
Blackberry Lily ( <i>Belamcanda</i> )	Every 3 to 4 years after bloom is finished.	Rhizomes should be treated as iris.
Black-eyed Susan ( <i>Rudbeckia fulgida</i> )	Every 3 to 4 years. Early spring or fall.	Spreading root division.
Blanket Flower ( <i>Gaillardia grandiflora</i> )	Every 1 or 2 years to maintain vigor. Early spring.	Spreading root division.
Bleeding Heart ( <i>Dicentra</i> )	Rarely needs division. Early spring.	Fleshy root division. Be gentle with brittle roots.
<a href="#">Cannas</a> ( <i>Canna</i> )	Every 3 or 4 years, or as desired to increase stock. Spring.	Fleshy root system.
<a href="#">Chrysanthemum</a> ( <i>Chrysanthemum</i> )	Every year or two. Spring.	Spreading root division.
Cranesbill ( <i>Geranium</i> )	Every 2 to 4 years. Spring or fall.	Spreading root division.
<a href="#">Daylily</a> ( <i>Hemerocallis</i> )	Every 3 to 6 years or as desired to increase stock. Spring, summer or fall. Ideal time is after bloom is finished.	Divide fleshy roots into segments with roots. Divisions with three or more shoots will bloom sooner.
<a href="#">Garden Peony</a> ( <i>Paeonia</i> )	For plant increase, rarely needs division. Divisions may wait up to 3 years before blooming. September or October.	Divisions should have three to five well-developed eyes (buds for next year's growth). Plant peonies with the eyes no deeper than 1 inch below the surface.
Garden Phlox ( <i>Phlox paniculata</i> )	Every 3 to 4 years. Early spring or fall.	Spreading root division.

## When and How to Divide Some Common Perennials continued

Common Name Botanical Name	How Often To Divide Season To Divide	Method Of Division
<a href="#">Hosta</a> ( <i>Hosta</i> )	Rarely need division and will reach their best form if not divided too often. They can be divided as needed for plant increase. Early spring or early fall.	Fleshy root division. Divide into clumps with one to three eyes. A wedge can be taken from an established plant, which will soon fill back in.
Lambs-ear ( <i>Stachys byzantina</i> )	Every 2 to 3 years. Spring or early fall.	Spreading divisions. Discard weak centers.
Lily of the Nile ( <i>Agapanthus</i> )	When flowering slows due to crowding. Spring, summer or fall	Fleshy clumping roots are large and brittle. Do not divide unless needed to improve bloom.
Lily of the Valley ( <i>Convallaria majalis</i> )	Divide for plant increase as desired. Early spring.	Can be divided as clumps or single "pips".
<a href="#">Ornamental Grasses</a>	Every 3 to 4 years. Spring for most grasses. Many grasses do not tolerate fall division.	Very dense fibrous root system may require the use of an ax or saw to divide.
Purple cone-flower ( <i>Echinacea</i> )	Every 4 years. Spring or fall.	Spreading root division.
Red-hot-poker ( <i>Kniphofia</i> )	Divide only for plant increase. Spring or fall.	Fleshy clumping root system. Divisions may take 2-3 years to bloom.
Tall sedum ( <i>Sedum 'Autumn Joy'</i> )	For plant increase. Spring.	Clump divisions.
Tickseed ( <i>Coreopsis</i> )	Every 1 or 2 years to maintain vigor. Spring or fall.	Spreading root division. Discard weak center.
Wormwoods ( <i>Artemisia</i> )	Every year or two for spreading wormwoods like 'Silver King' and 'Valerie Finnis.' Spring.	Spreading root division, or remove excess and dead center. Do not divide woody artemesias.
Yarrow ( <i>Achillea</i> )	Every 2 or 3 years or when center dies out. Spring or fall.	Spreading root division.

Prepared by Karen Russ, HGIC Information Specialist & Bob Polomski, Extension Consumer Horticulturist, Clemson University. (New 06/99.)

This information is supplied with the understanding that no discrimination is intended and no endorsement by the Clemson University Cooperative Extension Service is implied. All recommendations are for South Carolina conditions and may not apply to other areas. Use pesticides only according to the directions on the label. All recommendations for pesticide use are for South Carolina only and were legal at the time of publication, but the status of registration and use patterns are subject to change by action of state and federal regulatory agencies. Follow all directions, precautions and restrictions that are listed.