

Guidelines for Dividing Perennials

Herbaceous perennials are the backbone of many gardens. They bloom during the spring and summer, then die back but rejuvenate the next year. Eventually however, you may notice that they are crowding out other plants; or the flower stalks are flopping over, causing it to look a little sad; or maybe there is a dead area in the middle of the crown. These signs mean its time to divide the plants.



REASONS FOR DIVIDING PERENNIALS

Dividing herbaceous perennials has a number of benefits”

- rejuvenates older, tired plants; stimulates new growth, improves flower production, and encourages stronger stems and can prolong a plant’s overall life expectancy.
- helps control a plant’s size. Perennials can eventually outgrow the space originally allotted to them, resulting in overcrowding.
- is a reliable vegetative propagation method that results in exact duplicates of the original plant in terms of bloom time, flower color, shape, size, and habit.
- is an easy way to increase the number of plants in your garden for free.

HOW OFTEN PERENNIALS SHOULD BE DIVIDED

Guidelines vary on how often to divide perennials. Most of them benefit from being divided every 3 to 5 years. Some perennials, such as chrysanthemums and most asters, may need to be divided more frequently. A few perennials, such as peonies, may not need to be divided at all. The best approach is to assess the plant on an annual basis.

SIGNS THAT A PERENNIAL NEEDS TO BE DIVIDED

Some gardening experts advise dividing a plant when it’s healthy and looking its very best. That sounds good in theory, but it’s more likely that the typical gardener will leave a plant alone until it’s obvious it needs attention. A perennial is clearly letting you know it needs to be divided if it:

- produces fewer or smaller flowers than in past years
- has smaller leaves or looks sparse in the middle.
- develops a dead spot or empty hole in the middle of the plant crown.
- is overcrowded and competing with nearby companion plants for space (not to mention nutrients, water, light, and good air circulation).
- has sparse foliage at the bottom of the plant.
- has weaker inner flower stalks that cause the plant to splay open in the middle.

- appears less vigorous in general.

WHEN TO DIVIDE PERENNIALS

The next step is to determine what time of year to divide the plant. In theory, perennials may be divided at any point during the growing season. While this is not a hard and fast rule, many sources recommend **dividing them when they are not actively growing or flowering** so that they can concentrate their energy into regenerating root and leaf tissue. For example:

- **Divide spring- and early summer-blooming perennials in the fall.** This gives the plant plenty of time to store up nutrients over the summer months before they are divided. Also, the cooler temperatures of fall are less stressful on newly divided plants while they are establishing new roots. As for timing, divide plants about four to six weeks before the ground freezes.
- **Divide fall-blooming perennials in early to mid-spring.** Plants in this category will have stored up energy in their roots over winter, which will facilitate their recovery from being divided. Divide the plants after the shoots have emerged and are a couple of inches tall. It is less damaging to a plant to divide it when leaves and shoots are small rather than when they are more mature.

Dividing a perennial during the sweltering hot summer months can be done, but it is not generally recommended.

HOW TO DIVIDE PERENNIALS DEPENDING ON ROOT STRUCTURES

Perennials vary widely in their root structures and crowns, as demonstrated in the broad categories described below. As a result, there's no "one size fits all" approach to dividing plants.



Freshly divided *Leucanthemum* (shasta daisy) yielded four generous divisions. Photo: Pat Chadwick

SPREADING ROOT SYSTEMS – This category consists of perennials with lots of slender matted roots that originate from many locations with no distinct pattern. Some members of this group have loosely formed root systems that can be divided by simply teasing them apart with your fingers. Others have more densely intertwined roots that must be cut apart with a sharp knife or pruners. Still others send out modified stems that root where they touch the ground. Those

can be divided by simply snipping the connecting stem with pruners to separate the “parent” plant from the “baby” plant, and then digging up and planting the baby elsewhere. Aromatic aster species, *Dendranthema* (chrysanthemum), *Monarda* (bee balm), *Stachys byzantine* (lamb’s ear), *Rudbeckia* (black-eyed Susan), *Macrorrhizum* (bigroot geranium), *Ajuga reptans* (bugleweed), *Solidago* (goldenrod), creeping sedum, *Achillea* (yarrow), and some fern species are representative of perennial species with spreading root systems.



Dividing daylily. Photo: Rebecca Finneran, Michigan State Extension

CLUMPING ROOT SYSTEMS —Perennials in this category have more tightly packed root structures that originate from a thick fleshy crown. This category is represented by *Phlox paniculata* (garden phlox), *Echinacea* (coneflower), *Hemerocallis* (daylily), *Astilbe*, and larger hosta clumps. For many of these, the crown is either so thick or tough that the divisions must be cut apart with a sharp knife, pruners, or spade. For plants such as daylilies, which have particularly dense crowns, the best way to divide them is to insert two garden forks back-to-back into the crown, and slowly pull them apart.

TAP ROOTS— While you can divide virtually any herbaceous perennial that has a crown with multiple roots, a plant with a single tap root is another story. Tap roots are difficult, if not impossible, to divide. *Asclepias* (milkweed), *Euphorbia* species, *Baptisia* (false indigo), *Actaea* (bugbane), *Platycodon* (balloon flower) and *Eryngium* (sea holly) are a few examples of plants with tap roots that grow deep into the soil. These species are better left alone rather than try to divide their roots. However, if you are determined to divide a plant of this type, use a sharp knife to slice off a portion of the taproot that has some foliage attached or an “eye” (growth point). As some tap-root plants age, they may develop multiple tap roots, in which case, you may be able to divide them by cutting them apart between tap roots without seriously damaging the parent plant.



Division of *Macrorrhizum* (bigroot geranium) clump with rhizomatous roots. Photo: Pat Chadwick

TUBEROUS ROOTS OR RHIZOMES – Plants with thick tuberous roots or rhizomes should be cut apart using a sharp knife. Examples include dahlias, canna lilies, and bearded irises. Each division must have a growing point or bud. For dahlias, make sure each division has a piece of the original stem and a growth bud. For irises, cut or break off the divisions from the “parent” rhizome and replant them so that the roots are spread out and the rhizome (the thick, fleshy part from which the roots extend) is sitting slightly above the surface of the soil. Discard the “parent” rhizome. It will not rebloom.

WOODY ROOTS— Some perennial species are actually small woody subshrubs with woody bases and tough, fibrous roots that rest on or near the surface of the soil. Such plants should not be divided. However, if they have branches that have developed roots where they touched the ground, cut those from the parent plant and replant them elsewhere. Examples include *Iberis* (candytuft), *Lavandula* (lavender), *Santolina* (lavender cotton), *Perovskia* (Russian sage), and some *Artemisia* species. Note: Tip cuttings or layering may be more successful methods than division with this root type. For information on propagating plants from cuttings, see [Creating New Plants from Cuttings](#) in the October 2020 issue of *The Garden Shed*.

HARD-TO-DIG ROOTS – Large ornamental grasses are a good example of this category. They form huge, tightly formed root structures that require enormous strength and effort to pull out of the ground. If you are successful in extracting the entire root ball from the ground, lay it on its side and use a hand saw or hatchet to divide it into smaller pieces. If that seems too difficult, it may be easier to leave the plant in the ground but carefully carve out a wedge from the outer edge of the clump and remove that portion only.

GENERAL GUIDELINES FOR DIVIDING PLANTS

Before dividing plants, decide where you’re going to plant the divisions and prepare the planting site in advance. This means loosening the soil, removing any grass, weeds or rocks, and incorporating some compost. Also, assemble your tools in advance. The goal is to transplant the divisions as soon as possible so that the roots don’t dry out when they are exposed to the air. Use a **sturdy shovel or spade** with a sharpened edge to make the task of digging up a plant easier and to help minimize damage to roots. Use a **clean, sharp, sterilized, non-serrated knife** for cutting roots apart. Use **garden forks** to pry apart the roots of some plants with particularly tough fibrous roots. Use **hand pruners** to snip off any broken or damaged roots. Once you’ve lined up the tools you’ll need, then you’re ready to tackle the task at hand. While each division needs a minimum of one shoot or eye (growing point) and some roots, it is better

to divide plants so that each division has at least **three or more growing points** plus a generous supply of healthy roots.

- Ideally, divide perennials on a cool, cloudy day when there's rain in the forecast.
- Water the plant the day before you divide it so that it is fully hydrated.
- Dig up the parent plant by inserting a shovel or spade straight down into the soil at the drip line. Depending on the plant, the drip line can be several inches to a foot or more from the plant crown. As you push the spade into the soil, pull the handle back towards yourself in a rocking motion to loosen the root ball from the soil. After you work your way around the perimeter, insert the spade at an angle beneath the plant to gently pry the root ball free from the soil.
- If the center of the clump is dead, focus on taking divisions from the outer part of the clump and discard the dead center.
- Trim off any broken roots with a sharp, sterile knife or pruners.
- Plant divisions right away in planting holes that are **two to three times wider but no deeper** than the root ball and with the crown just slightly above the soil level.
- Firm soil so that there's good contact with the roots and to eliminate any air pockets.
- Water well after planting but don't drown the plants. The soil needs to be kept evenly moist for the first couple of weeks but not soggy.
- After the plants become established, which can take several weeks, **fertilize lightly** with a balanced organic fertilizer. Don't fertilize at the time you plant the divisions because fertilizer can burn the plant roots if it comes in contact with them.
- For divisions that you plant in the fall, mulch the root zone with about 2 to 3 inches of chopped leaves, shredded hardwood mulch, or other organic mulch **after** the first freeze. This will prevent the divisions from heaving out of the ground during winter's freeze/thaw cycles.
- If you find it necessary to divide a perennial in the summer, **cut back the foliage on the divisions by about half** or more to reduce water loss by evaporation. Replant the divisions immediately and protect them from the hot sun until they become established. Keep the divisions moist (but not soggy) while they recuperate. **Exception to the rule:** Bearded iris is a spring-flowering bulbous perennial that goes dormant in summer and may be divided in July or August with no ill effects from the heat.

COMMON MISTAKES GARDENERS MAKE IN DIVIDING PERENNIALS

Mistakes to avoid when dividing perennials include:

- **Digging too close to the root ball.** It's much better to dig up too much soil and have to brush it off the root ball than it is to accidentally chop off the roots of the plant you intended to divide.
- **Digging up the plant incorrectly.** To loosen a plant from the soil, insert the spade **straight up** and down around the perimeter of the plant. Then, insert the spade at an angle beneath the plant to lever the plant out of the ground.
- **Making too many divisions.** If the division is too small, it may not have enough roots to support the plant. Also, it will need an extra year or two to grow large enough to make a decent floral display.
- **Not making enough divisions.** If the divisions are too large, you may have to divide the plants all over again the following year or two.
- **Dividing plants in the heat of the day.** It is less stressful to divide a plant either in early morning or late afternoon when temperatures are cooler.
- **Not shading newly divided plants** from hot sun. This is more of a problem for perennials divided in late spring and not so much an issue for fall-divided perennials. Any plant that is divided in the heat of summer definitely should be shaded from the sun for a week or so while they are becoming established.
- **Not keeping newly divided plants properly watered.** Until a plant division establishes new roots and root hairs, don't let it dry out. Keep the soil moist but not soggy.