

Collarettes have a single row of petals around a central disk, plus one or more rows of smaller petals. These smaller petals are usually of a different color, and form a collar around the disk.

Peony dahlias have two to five rows of petals surrounding a central disk.

Double-Flowering Dahlias

Double-flowering dahlias include cactus, semi-cactus, decorative, ball and pompon types.

Cactus dahlias have petals that curve backward for more than half their length. Petals are somewhat tubular.

Semi-cactus dahlias resemble cactus dahlias, but the petals are broad at their base and curve for less than half their length.

Decorative dahlias are of two types. Formal decoratives have broad pointed or rounded petals, slightly curved back toward the stem. The petals are regularly arranged. Informal decoratives have long, often twisted petals that are irregularly arranged.

Ball dahlias are ball shaped or slightly flattened, having petals in a spiral arrangement. Petals are blunt or rounded at the tips, and quilled or turned in along the margins. Flowers are over 3 ½ inches in diameter. Miniature ball dahlias are 2 - 3 ½ inches in diameter.

Cactus, semi-cactus and decorative dahlia flowers are also classified into four groups, based on the diameter of the flower.

Large, over 8 inches;
medium, 6 - 8 inches;
florist, 4 - 6 inches and miniatures, under 4



inches.

Pompons have the same characteristics as ball dahlias, but are under two inches in diameter.

PLANTING

Depending on the varieties and types you select, you may plant dahlias in low borders, along fences or walls, in clumps and beds, or simply in rows.



Where to Plant

Dahlias do best in a sandy loam that is slightly acid, but they will grow successfully in most garden soils that are well drained. Select a planting site that gets at least 6 hours of sun a day. Dahlias should have good air circulation and protection from strong winds.

Dahlias need room to develop. Large flowering dahlias should be placed about 3 or 4 feet apart in rows that are also separated by 3 or 4 feet. You can plant smaller dahlias about 2 feet apart.

What to Plant

You can buy dahlias as seeds, rooted cuttings, or dormant roots.

Because dahlias are hybrids, seeds won't always produce plants with flowers like those from which the seeds were taken. Rooted cuttings are simply immature plants. Most gardeners prefer to buy dormant roots or to plant dormant roots saved from the previous year.

When to Plant

Ordinarily you should start seeds indoors in boxes of sandy loam soil not more than a month before the last spring frost is anticipated. Keep the soil moist. Then transplant the seedlings outside when frost is no longer a danger. Where the frost-free season is long enough, you may broadcast seeds or sow them in rows directly outdoors in a sunny location. About 12 - 14 weeks is needed for blooms to appear.

Whether you sow seeds indoors or outdoors, cover them with only $\frac{1}{2}$ inch of soil. It is also a good idea to treat seed with a seed fungicide before planting.



Do not plant rooted cuttings until after the last spring frost. If necessary, keep them in a coldframe or greenhouse until they can be transplanted to the garden.

Plant roots or cuttings outdoors as soon as the danger of spring frost is past. If the soil needs enriching, spade in well-rotted manure at least 2 or 3 weeks before planting. A 5-10-5 commercial fertilizer can also be used for this purpose at a rate of about 2 or 3 pounds per 100 square feet.

How to Plant

When planting roots, dig a hole 6 - 8 inches deep and large enough to accommodate the root. Put the root in the hole and place a stake directly alongside.

All dahlias should be staked, except for dwarf varieties. You should place stakes at planting time, because driving a stake later on could injure developing root systems.



Stakes should be 3 - 6 feet above ground, the height depending on the variety of dahlia grown.



Cover the root with 2 or 3 inches of soil. As growth develops, add soil around the plant until the surface is level or slightly mounded.

Soil should be kept loose over the root, since crusting can prevent the sprout from emerging.

When planting rooted cuttings outdoors, dig a hole about an inch deeper than the root ball. Place the plant in the hole and fill in with soil to ground level.

CARING FOR DAHLIAS

Watering and Fertilizing

Dahlias should be watered often enough to prevent the soil from drying out. To help prevent mildew, always soak the soil thoroughly around the base of the plant instead of sprinkling the foliage.

Fertilizer may be used to condition the soil before planting, as described earlier. Soon after sprouts emerge, you may add a top dressing of 5-10-10 or 2-12-12. The fertilizer you use will depend on the amount of nitrogen already in the soil.

Rake into the soil $\frac{1}{3}$ - 1 cup of fertilizer per plant. Keep the fertilizer away from the base of each plant.

Cultivating

Early in the growing season, apply a mulch to control weeds and to keep the soil cool. Then cultivate dahlias only as much as is needed to control any weeds that may grow through the mulch. After about mid-July,

avoid working the soil more than an inch deep within 18 inches of the plants; dahlia roots are shallow and can be injured.

Pinching

When plants reach about a foot in height and display three or four pairs of leaves, break off the center stem above the top pair. This encourages strong side-branching. One pinching is enough for larger dahlias; an additional pinching will be necessary for smaller plants.

Tying

When the plant is tall enough to need support—more than a foot—tie it loosely to the stake you placed at planting time. This will insure an upright plant with straight branches.

Disbudding

You can increase the size of blossoms by removing lateral buds from large-flowered varieties. When the three buds that form at the end of each branch reach the size of small peas, remove the two side buds. The center bud will then develop into a larger blossom. Small-flowered dahlia plants should not be disbudded. Dead flowers should be removed from all dahlia plants.

PROPAGATING DAHLIAS

You can propagate dahlias by growing seeds, taking cuttings, or dividing the roots of plants that you grew the previous year.

Seeds

Propagating dahlias from seeds is a relatively easy



process and is a way to produce new dahlia varieties. Single varieties generally provide abundant seeds; doubles produce considerably fewer.

Cuttings

Propagating dahlias from cuttings is a popular way to produce more plant stock of a particularly desirable variety. Here's how it's done:

- About the first of March, place the root in a flat or pot and cover it with sand or loam soil, but leave the crown exposed.
- Place the flat or pot in a warm, light place and keep the soil slightly moist.
- When the sprout forms a shoot with two pairs of leaves, cut the shoot off with a razor blade to make about a 2 inch cutting.
- Dip the shoot in a rooting medium and pot it.
- When it is strong enough, and the weather is warm enough, plant it outdoors in a well-prepared bed.

Where the shoot was cut, two or more additional shoots will begin to grow. These can also be cut and potted, and still more sprouts will develop. By spring planting time, six or eight plants can usually be obtained in this manner.

Root Division

By far the easiest and most popular method

of propagation is root division. By the end of the growing season the single root that was planted in the spring will have developed into a clump of roots. Lift these clumps gently in the fall and store them during the winter in a cool dry place, such as an attic in which the temperature does not drop to 32° F.

Then as the next spring planting time approaches, divide these clumps carefully with a sharp knife. Be sure that a piece of the crown with an eye is connected to each root. Roots without an eye will not grow and should be thrown away. If it is difficult to distinguish the eyes on the root clumps, keep them moist in a warm place, such as a furnace room, for a short time before you try to divide them. Sprouts will form. Divide the clumps as soon as eyes are visible.

After you have made the division, brush the wounds with a sulphur dust, obtainable from your garden supplies store. The dust will help protect the roots from fungus attack through the wound.

DISEASES

Of several diseases that affect dahlias, two virus diseases are the most destructive. One is dahlia mosaic, which stunts plant growth and produces yellow or pale green bands along the veins of affected leaves. The leaves may be smaller than normal, wrinkled or blistered.

The other major disease is ringspot, so called because of the yellow circles produced on the leaves. As time passes, these may merge into larger yellow or pale green areas, and the centers of the rings may turn brown.

Both diseases are carried in roots and

cuttings from diseased plants, and new plants produced from them will also be infected. Therefore, if disease symptoms should appear, your safest course is to pull the affected plant out and destroy it.

Dahlia mosaic and ringspot are transmitted by insects from infected plants to healthy plants. You should spray or dust with a general purpose insecticide for good insect control, which may reduce but not prevent virus disease spread.

INSECTS

Aphids spread dahlia mosaic, and thrips transmit ringspot virus. A number of other insects also attack dahlias. The corn earworm, blister beetles, and the European corn borer may be controlled with carbaryl; spider mites with dicofol; and cucumber beetles, plant bugs, aphids and thrips with malathion.

Follow directions and precautions on the insecticide label.

You may also obtain information on pests from your local Extension office.

Dahlias As Cut Flowers

Cut dahlias can last a week or more if properly treated.

Always cut dahlias early in the morning or after sunset. Place the flower in the container in which it will remain and cut off a small portion of the stem under water. Or you may scrape the bottom 3 or 4 inches of stem before placing the flower in water.



You can also prolong the life of cut dahlias by passing the end of the stem quickly over a flame or by dipping the stem in boiling

water for several seconds before placing the flower in cool water.