

Planting and Care of Bulbs, Corms, Rhizomes, and Roots

Bulbous plants in the landscape can provide years of enjoyment if you follow the few steps listed below.

Tulips are among the most popular of the bulbous plants. But several other beautiful flowering plants come from true bulbs, corms, tubers, or rhizomes that provide color in the landscape. These include spring- and summer-flowering bulbs (daffodils, lilies, and hyacinths) and tubers (anemones), corms (gladiolus, crocus, and freesia), tuberous roots (ranunculus and dahlia), and rhizomes (cannas and callas). You can enjoy flowers throughout the spring and summer by using these different forms.

A true bulb is a miniaturized plant complete with flowers packed in its self-contained starter kit. Bulbs need several months for root growth to support the foliage and flower. *Note: For simplicity in this publication, the term "bulb" may include corms, rhizomes, or roots.*

Plant large masses of bulbs to appreciate the beauty. Before planting and to help determine your needs and keep the plants in harmony in your landscape, visualize what will be in leaf or bloom at the same time as the bulbs.

It is important when landscaping with bulbs to plant groups of 12 or more of the same variety. Massed flowers look better; avoid the polka-dot or soldier effect.

Plant tall bulbs (lilies, late tulips) in the background near landscape plants of a similar size. Some hardy bulbs grow and multiply for years when you plant them along with flowering annuals and shallow-rooted herbaceous perennials. Areas near shallow-rooted trees and woody ground covers (such as ivy and junipers) are not favorable for hardy bulbs.

When buying bulbs, always select ones that are firm and blemish-free. Remember, large bulbs produce large flowers.

Planting Time

Plant spring-flowering bulbs when the soil temperature is 40 to 45 °F. Bulb root growth occurs within this temperature range without the initiation and growth of the foliage. The ideal time for planting spring-flowering bulbs is mid October through November in north Mississippi and late December in south Mississippi. Plant summer-flowering bulbs after danger of spring frost.

Bed Preparation

If you are planting a large number of bulbs, prepare the beds 9 to 12 inches deep. Uniform bed preparation permits a uniform planting depth that helps ensure uniform flowering. Plant in well-drained soils.

Fertilization

Don't guess; soil test. Bulbs grow and flower well with a soil pH between 5.5 and 7.0. Phosphorus is important for proper root and flower development. Because phosphorus is not mobile in the soil, add it to the soil before planting. After planting, apply a complete fertilizer (such as 5-10-10 at 3 pounds per 100 square feet) in early spring before bloom for spring-flowering bulbs. For summer-flowering bulbs, apply 5-10-10 at 2 pounds per 100 square feet three times during the growing season at 6-week intervals.

If you plant bulbs with a bulb planter or trowel, apply one teaspoon of bone meal to the bottom of the planting hole 1 to 2 inches below the bulb.



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Spring-Flowering Bulbs

Tulips* (*Tulipa* sp.) – Treat large flowering tulips as annuals in most of Mississippi. You can leave them in the ground in plant hardiness zones 3 through 7, but performance usually declines after the first growing season. The largest flowers are produced the first spring after fall planting. Because the bulbs multiply, any later flowers are smaller. Plant the bulbs 5 to 8 inches deep (two and one-half times as deep as bulb is wide) and 4 to 6 inches apart. If you plant bulbs deeper, they tend to multiply less and produce large, beautiful flowers for years. Tulips require a cold rest period between seasons. If you dig the bulbs after the foliage dies, refrigerate them for 6 to 8 weeks at 40 to 45 °F before planting them in November and December. The many tulip varieties available today offer gardeners a choice of colors and a longer blooming season.

Daffodils (*Narcissus* sp.) – Daffodils are one of the most popular spring-flowering bulbs. Plant the bulbs in fall (October through November) 3 to 6 inches, depending on size of bulb (three times deeper than the diameter of the bulb). Space the bulbs 6 to 8 inches apart. You can plant daffodils in sun or light shade and leave in the ground where they multiply. When the flower size and number decline, dig the bulbs in late spring and separate them. It is important to wait until the foliage begins to yellow and wither to ensure optimum growth and development of the bulb. The presence of foliage helps in finding the bulbs underground.

Hyacinths* (*Hyacinthus* sp.) – Hyacinths smell sweet, announcing the arrival of spring. These bulbs are hardy in Mississippi. Leave them in the ground to multiply. Flower size may decline as the bulbs multiply. Plant hyacinth bulbs in full sun in the fall 3 to 6 inches apart and 3 to 5 inches deep. To have large flowers every year, dig the bulbs after the leaves wither, and replace them next fall with more large bulbs.

Crocuses* (*Crocus* sp.) – Crocuses are normally thought to be spring-flowering corms, but some offer midwinter blooms while others offer their beauty in the fall. Plant crocuses in full sun in early fall. Plant the corms 2 to 3 inches deep and 2 to 6 inches apart. Separate every few years after the foliage begins to wither.

Irises (*Iris* sp.) – Irises are persistent bloomers in the landscape, offering years of beauty with little attention. The principal types of iris are bearded, beardless, crested, and bulb. Plant heights range from 2 inches to 6 feet, depending on variety. Dig and separate every few years as the rhizomes become crowded.

Summer-Flowering Bulbs

Dahlias (*Dahlia* sp.) – Dahlias are among the easiest garden plants to grow. The plants flower in virtually every color except clear blue, and flowers range in size from less than 1 inch across to those more than a foot in diameter. Plants normally bloom from midsummer until frost. You must dig and store the fleshy roots each year, since they are not winter hardy. Many varieties can be started from seed. When propagating roots, be sure a portion of the old stem remains attached. This ensures bud development of the new plant.

Gladioli (*Gladiolus* sp.) – Gladioli offer a wide array of colors and are often grown as cut flowers. The plants grow and flower best in full sun. To extend the flowering season throughout the summer, plant the corms at 7- to 10-day intervals until 2 months before the first frost is expected. Plant the corms 3 to 6 inches deep, depending on size of corm. To keep the plants erect, stake them or mound up additional soil around the plants when they reach a height of 12 inches.

Cannas (*Canna* sp.) – Cannas can be left in the ground in Mississippi throughout the year. Plant the rhizomes 2 to 4 inches deep and 12 to 18 inches apart. Plant in full sun. Propagate by dividing the rhizomes in the spring.

Caladium (*Caladium* sp.) – Caladiums are grown for their beautiful colored leaves. They provide beauty in full sun to heavy shade, depending on the species you select. Plant caladium tubers when the soil temperature is approximately 70 °F. Plant with the top of the tuber even with the soil surface and 8 to 12 inches apart. In the fall, dig the plants just before the first frost, and let the foliage wither in a protected place. Remove the foliage once it is dry, and store the tubers over winter at 55 to 60 °F. To encourage a single, large stem with leaves, remove all eyes except one before planting.

Daylilies (*Hemerocallis* sp.) – Plant the tuberous roots of daylilies ½ to 1 inch deep and 2 to 2½ feet apart. There are many colors and heights for any landscape. You can extend the early summer blooms for more than a month by choosing the right variety. Divide the clumps every 3 to 5 years.

**Tulip, crocus, and hyacinth bulbs are subject to bulb mite infestation in the field. These infestations can be carried over in storage. When buying bulbs, select only those that are of high quality and insect-free.*

Cultural Tips

- Provide plenty of phosphorus for the development of the underground storage organs.
- Soil test to insure proper soil pH is obtained and adequate fertility provided.
- Plant smaller bulbs, tubers, or corms more shallowly and closer together.

Methods of Planting

- Prepare a bed to plant bulbs in quantity.
- Plant bulbs two and one-half times deeper than their diameters.
- Bulbs may be planted individually by using a bulb planter to remove a core of soil and placing the bulb in the hole, or use a trowel to open a hole within the soil. Pull the trowel toward you to open the hole for placement of the bulb.

- For bulbs that are **rootless** at planting time, dig a wide-based hole and set bulb securely on soil.
- For bulbs **with roots**, make a ridge of soil and spread roots downward.
- After planting, thoroughly water the soil to establish good contact between bulb and soil and to provide enough moisture to initiate root growth.
- To extend the blooming period, plant bulbs at different depths. Location, such as sun versus shade, is an excellent way to vary the time of bloom up to 2 weeks.

Diseases, Disorders, and Insects of Bulbs

Name	Symptom or description	Control**
Anthracnose (tulips)	Small to large elongated dark lesions on the stem and leaf blades.	Remove and destroy infected parts. Spray with Ferbam, Mancozeb, or another fungicide approved for this use.
Basal rot (tulips)	A white to pink mold usually covers the bulbs.	Discard all infected bulbs, and treat healthy looking bulbs with a fungicide before planting (Thiram).
Leaf scorch (daffodils)	Resembles frost injury. The leaf tips may burn one-third of the way down.	Treat bulbs to kill fungus that may survive in the other scales. Bulbs may be soaked in a formaldehyde solution before planting.
Virus (all bulbs)	Variegation (breaking) may occur in the flower, yellow streaks may develop in the leaves, and plants are generally smaller and weaker.	No chemical control. Destroy all infected plants as they appear. Also control all sucking insects that can transmit a virus.
Tuber Rot (caladium)	A decay of the tubers may occur when in storage or during the growing season.	Select disease-free tubers and store properly. Soak tubers in a fungicide solution (Merteck 340-F or Ferbam) before storage. Remove any decayed tubers.
Leaf Spot (caladium)	Lower leaves may develop light tan to brown spots.	Leaf spots may occur but generally are not severe enough to warrant chemical control. Remove diseased leaves as they appear.
Leaf Burn (caladium)	Burning of margin of older leaves.	Usually due to lack of water.
Aphids (caladium)	Small soft-bodied insects found on either surface of the leaf. Insects may be green, pink to reddish brown, or black.	Spray with malathion.
Cutworms (caladium)	Damage by a chewing insect on young leaflets as they emerge from soil.	Dust 5 percent carbaryl (Sevin) at base of plant.
Thrips (caladium)	Young leaves show puckering, curling, or other abnormalities.	Spray or dust with carbaryl (Sevin).

**Use rates and frequency of materials listed as directed on container label.

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