



Growing bulbs delight the garden in the spring. A colorful assortment of major bulbs, including tulips and daffodils, bloom from early spring until late in the season. The smaller, minor bulbs

add a variety of colors and shapes. They provide a natural wildflower look and grow easily in mixed settings or borders. Fall bulbs thrive in cooler climates and are natives of Europe, western Asia and northern Africa. Tulips, daffodils and hyacinths are the most popular fall-planted bulbs and are grouped according to bloom times, flower characteristics and growth habits. There are hundreds of tulip varieties, about 25 of which are fragrant.

## Planting and Care

Fall bulbs can be planted as perennials that die down during the summer, remain dormant through the winter and emerge each spring. Bulb life varies, but around five years of flowering is average before they need replacing. Smaller bulbs will produce for longer periods. Small bulbs emerge first. Crocus and grape hyacinths are popular for being the first sign of spring and often emerge through the snow. Minor bulbs can be planted after perennials have been cut to the ground in the fall. Plant informally by broadcasting the bulbs, as many as 500 to 700 per 100 square feet. Plant bulbs approximately twice as deep as the height of the bulb. For example, if the bulb is 1 inch tall, plant the tip of the bulb 2 inches below the ground. Minor bulbs are great naturalizers and can be planted with perennials or other plants. Space them at least 3 to 4 inches from the crown of perennials. The small plants will fade out before other garden plants begin spring growth. Once planted, the minor bulbs will grow without special care.

Fall Bulbs

For spring flowering, fall bulbs look best planted in groupings. The arrangement can be formal, geometric or naturalistic. Space larger bulbs such as tulips, hyacinths and daffodils (narcissus) 4 inches apart, and plant 4 to 5 inches deep. Add well-rotted compost or peat moss and bone meal to the top of the soil. Apply bone meal at the rate of 2 to 3 ounces per 10 square feet. As the bed is prepared, mix bone meal and organic matter with the soil to a depth of 6 inches. In zone 5 climates, apply an additional layer of organic mulch 1 to 2 inches deep after the ground begins to freeze. Fall bulbs need 12 weeks of temperatures below 40°F to bloom in the spring. The best time to plant spring-flowering bulbs is from mid-September through November.

After spring blooming, let the foliage die back naturally to restore nutrients to the bulb. The foliage may be clipped off after it has yellowed and turned brown. Some of the larger bulbs (e.g. tulips) may be treated as annuals and lifted in late spring to make room for other plants. Dig carefully to avoid bruising or cutting the bulb. Lay the bulb and foliage in a shady location and allow the foliage to die back and become dormant. Clip off dead foliage when it becomes dry and brown, and then dust the bulbs with sulfur. Store the bulbs in a single layer on trays or ventilated boxes with mesh bottoms. Place the trays in a dry, cool and ventilated area similar to a basement. Treating these bulbs as annuals allows the ground to be reworked and fertilized with bone meal again in the fall before resetting.

## Bulb Types

Minor bulbs are small and early flowering groups that require little care and provide a naturalistic sweep of color before most plants grow. Crocus is a cup-shaped flower in bright purple, yellow and lavender. Grape hyacinths (muscari) appear as small, purple grape clusters on small plants that look great in large numbers. Galanthus are often called



snowdrops. They have a dainty, drooping, white flower with green tips. Anemone is a low-growing star-shaped flower that makes a perfect ground cover or can be forced to bloom in small pots. Scilla, also known as wood squill, are great spreaders that cast their seed. Scilla are blue and white and have a delicate scent. Hyacinthoides is a classification of scilla also known as woodland bluebells. It has a bell-shaped, pendant flower. Camassia is a wild hyacinth with long racemes of star-shaped flowers and narrow foliage on upright stalks.

Tulips are classified by height and bloom times. The Botanical tulips are the first to bloom in the spring. They are valued for their varied shapes, unusual foliage and gorgeous colors. Emperor, or Fosteriana, is mid-sized with large flowers, and Kaufmanniana is low-growing and resembles a water lily.

The hybrid tulips are single-early and double-early tulips that bloom in mid-April. Giant Darwin hybrids are among the most popular tulips blooming April through May, with vibrant colors on strong stems. Triumph tulips are a cross between Darwin tulips and early tulips. They bloom in late April and are daintier than Darwins with exquisite pastel colors. Peony flowering tulips are double, long lasting, late bloomers that resemble a peony flower. Another May bloomer is the Parrot tulip, with exotic large flowers and fringed edges. Green tulips are a distinct, delicately feathered tulip with green on soft-colored petals. May blooming multiflowering tulips are bunch-type tulips with at least four full-size blooms per stem.

A popular bulb noted for its profusion of color and shape is the narcissus, commonly called daffodil. These flower in April, make good cut flowers and are used in the garden for early color in large groups. They do well in sun or shade, but do not like wet or soggy conditions. The flower resembles a trumpet and may be dwarf, large, single and doubles. The most prominent color is yellow in multiple variations, although pink varieties are also available. The most popular daffodil is the King Alfred.

> Emily Nolting, Ph.D. Commercial Horticulture Specialist K-State Research and Extension enolting@oznet.ksu.edu