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Spring Flowering Bulbs

Selecting, planting, caring for, harvesting and forcing spring flowering bulbs are discussed in this publication.

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Spring flowering bulbs may be used to provide early season color in your garden while other plants are slowly developing. When the bulbs have finished blooming, the dying foliage can be hidden by the developing growth of other flowers and shrubs in the bed. Spring flowering bulbs offer an early start to a full season of color in your garden.

You can choose from hundreds of spring flowering bulbs that produce plants varying in flower color, form and height. Among the most popular are tulip, narcissus, grape hyacinth, hyacinth and crocus. Less known spring flowering bulbs include scilla, allium and Dutch iris.

In this publication, all corms, tubers and rhizomes will be referred to as bulbs. All "bulb" plants have a food storage organ that allows the plants to survive when dormant or when growing conditions are unsuitable. Bulbs are underground organs formed by fleshy scales attached to a basal plate (for example, tulip, narcissus, lily). Corms are underground swollen stems surrounded by dry, scale-like leaves (gladiolus, freesia, crocus). Tubers are swollen underground stems that are often irregularly shaped (potato, gloriosa, ranunculus). Rhizomes are horizontally creeping underground stems that produce aerial shoots from nodes (iris, convallaria).

Selecting

The bulbs available in garden stores vary considerably in quality, so select them carefully. Make sure they are healthy and firm with strong growing points and unblemished skin. Avoid small, soft and diseased bulbs. Bulbs that are smaller than others of the same type will not produce flowers during their first season.

Choose bulbs that will produce flower colors and forms which will complement the rest of your landscape. They also should be able to adapt to the amount of sunlight in your garden. Most need full sun, a minimum of six hours daily, but some require shade. Some will naturalize in grassy areas.

Planting

Bulbs are among the easiest plants to grow. Numerous cultivars and species thrive in most exposures except heavy, constant shade. They need well-drained soil because they are prone to rot while dormant.

Planting bulbs singly is not effective. Bulbs should be planted in waves or masses so they look natural. Be sure to buy enough bulbs to get a good display in your garden.

Spring flowering bulbs should be planted in late September through October, when soil temperatures fall below 60° F. This will allow a root system to develop before the ground freezes. If bulbs are purchased before planting time, keep them in a cool, dry area. A temperature of 60° F to 65° F is cool enough to preserve the energy of the bulbs until they can be planted. Extended storage in high temperatures can damage flower buds within the bulb. Flowering bulbs that mature early in the year can be planted near deciduous trees because they will bloom and die back before a dense canopy has developed. However, if you desire repeat bloom for at least three years, the site should receive full sunlight eight hours per day.

When establishing a new bed of bulbs, the soil should be loosened to at least 4 inches below the bulb's suggested planting depth. For example, if the recommended planting depth is 6 inches, the bed should be prepared to at least 10 inches.

Dig and plant flower beds when the soil is fairly dry. Wet soil packs tightly around the bulb and retards growth. If you can crumble the soil between your fingers, it is dry enough for digging and planting.

Using a spade, remove soil to the correct depth. Planting depths and spacing for common bulbs are listed in *Table I*. In loose, sandy soil, plant bulbs 3 to 4 inches deeper than the recommended depths for heavier soils.

Place the bulb in the hole with the pointed end up. Replace and firm the soil around the bulbs to ensure no air spaces have formed. Thoroughly water in the bulbs and water occasionally thereafter until winter. In late fall, add a mulch cover to protect the bulbs.

Bulbs planted in a southern exposure, near a building or wall, will bloom earlier than bulbs planted in a northern exposure. A southern exposure within 4 feet of a building isn't a desirable location because the flowers, gaining heat from the building, frequently emerge early and flower buds are then damaged by a late spring freeze.

Some bulbs, such as tulips and hyacinths, are short-lived. Selecting an appropriate site, planting at the proper depth, selecting recommended varieties and performing routine maintenance will prolong their life. Some bulbs, such as hyacinths, may never flower in Nebraska because of our high soil temperatures.

Routine Maintenance

Remove faded flowers to prevent seed formation, which takes energy away from the bulb and may reduce flowering the next year. Deadheading some types of tulips and narcissus also can increase flowering for up to two months.

To help replenish nutrients, apply a nitrogen fertilizer after the flowers have faded. This will help create energy for next year's bloom.

After the leaves have turned yellow, cut and remove the foliage. Removal of dead foliage from the garden will help prevent diseases from affecting next year's bloom. To hide unattractive, yellowing foliage, plant annual flowers in front of spring flowering bulbs.

Place a mulch cover over the bulbs after cold weather has arrived, usually in late October or November. This will conserve soil moisture and protect the bulbs from temperature fluctuations in the soil. Don't add mulch too early or the bulbs may be damaged. Mulch should be removed from the soil in the spring once danger of freezing has passed. This will warm the soil and initiate plant growth. After the plant has emerged from the soil, a layer of mulch may be added to help conserve soil moisture and prevent weed competition.

To control weeds in your garden, pull them by hand or use chemical methods. Several herbicides can help control weeds; contact your local county extension office for recommendations. Use a hoe or other weeding equipment carefully to avoid injuring the plant stems or the bulbs themselves.

Harvesting

Bulbs can be harvested for thinning, relocating or redesigning the bed. Wait until the leaves have turned yellow to dig the bulbs. They should be harvested when they are mature (tan to brown) rather than when they are immature and white. Do not cut the leaves off; they will help locate the bulbs.

After the bulbs have been harvested, they should be inspected. Keep only the ones that are firm and disease-free.

Spread the bulbs in a shaded, well-ventilated place to dry. When the outer scales have dried, store the bulbs away from sunlight in a cool, dry basement, cellar, garage or shed at 60-65° F. Avoid temperatures below 50° F or above 70° F. Inspect bulbs throughout the summer and remove decayed ones as soon as possible. Bulbs should be sorted and replanted according to size in the fall.

Forcing

Bulbs can be forced into bloom during the winter and early spring to bring color and fragrance indoors. The easiest to force are crocus, hyacinth, narcissus, scilla, muscari, iris and tulip.

Starting in October through the end of November, you can plant bulbs in clean pots with adequate drainage holes. Use soil that drains well; for example, a mixture of one part loamy soil, one part organic matter such as peat and one part sand. Do not add fertilizer. Select the proper cultivars for the desired flowering period. Check with local garden stores for cultivar recommendations.

Plant bulbs so their tips show above the soil line. Do not push the bulbs into the pots because it will compact the soil below the bulbs and inhibit rooting. Tulips bulbs should be planted so that the flat side of the bulb is facing the outside of the pot. This will result in the first leaf facing outward and an attractive flowering pot. On average, 15 crocus, four to six daffodils, three hyacinths or six tulip bulbs will fit in a 6-inch pot.

The pots should be maintained at a temperature of 35° F to 48° F for a minimum of 12 to 13 weeks. Suitable locations would be an unheated basement, storage area, cellar or cold frame. Keep the soil moist.

After 12 weeks, the bulbs should be well rooted and short shoots should be present. The pots should be

brought into a bright, cool room, 55° F to 60° F. The bulbs will flower in three to four weeks. Once the plant flowers, it can be moved to a cool location at night to extend blooming. Discard the plant after flowering. Forced bulbs will seldom rebloom when planted outdoors.

Table I. Planting depth, spacing and flowering height for spring flowering bulbs in Nebraska.

<i>Flowering Time</i>	<i>Planting Depth *</i>	<i>Spacing</i>	<i>Flower Height</i>
<i>Very Early (March - April)</i>			
Chionodoxa (Glory of the Snow)	4"	2"	4 - 6"
Crocus	4"	2"	4"
Eranthis (Winter Aconite)	4"	2"	4 - 6"
Galanthus (Snowdrop)	4"	2"	4 - 6"
Puschkinia	4"	4"	4 - 6"
Scilla (Siberian Squill)	4"	2"	4 - 8"
<i>Early (April)</i>			
Kaufmanniana Tulip	6"	6"	6 - 8"
Muscari (Grape Hyacinth)	4"	3"	6 - 10"
Fosteriana Tulip (Emperor)	6"	6"	15 - 20"
Single and Double Early Tulips	8"	6"	12 - 16"
Miniature Daffodil	5"	4"	4 - 6"
Trumpet Daffodil	8"	6"	18 - 20"
Hyacinths	8"	5"	8 - 12"
Rock Garden Iris	4"	2"	4 - 6"
Large Cupped Daffodil	8"	6"	10 - 20"
<i>Mid-season (late April - early May)</i>			
Greigii Tulip	8"	6"	6 - 20"
Mendel and Triumph Tulips	8"	5"	16 - 20"
Daffodil (Narcissus)	8"	6"	12 - 20"
Darwin Hybrid Tulip	8"	6"	20 - 28"
Fritillaria	8"	12"	8 - 18"
Species Tulip	8"	6"	5 - 10"
<i>Late (May)</i>			
Scilla (Spanish Bluebells)	4"	5"	12 - 15"
Parrot Tulip	8"	6"	18 - 22"
Double Late Tulip (Peony-flowering Tulip)	8"	6"	16 - 20"
Lily Flowering Tulip	8"	6"	18 - 24"
Darwin Tulip	8"	6"	22 - 28"

Cottage Tulip	8"	6"	22 - 28"
Green Tulip	8"	6"	20"
Fringed Tulip	8"	6"	18 - 26"
Bearded Iris	6"	4"	30 - 36"
<i>Very Late (June)</i>			
Dutch Iris	6"	4"	18 - 22"
Allium	4"	6"	6 - 48"
* Planting depth - measured from base of bulb.			

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