



Selection, Planting and Care of Bulbs

Flowering bulbs are an important addition to any landscape or garden. Because of the wide variation in flowering time in different bulbs, they will add color to the landscape from early spring until late fall.

Bulbs can be classified as *spring-flowering bulbs* or *summer-flowering bulbs*. Another way to classify bulbs for use in Illinois would be *hardy spring-flowering bulbs* and *tender summer-flowering bulbs*.

Summer-flowering bulbs (tender bulbs) are bulbs that are killed by cold temperatures. They must be planted in the spring when there is no longer a chance of ground frost. They need to be dug in the fall following the first frost that discolors the foliage and then stored over the winter.

The spring-flowering bulbs (hardy bulbs) such as tulips, daffodils, and crocus need a cold period during the winter to flower. These bulbs are planted and develop a root system in the fall, and then they bloom during the spring. Temperatures are cold enough in Illinois during the winter to meet these cooling requirements. For instance, tulips require 12 or more weeks of cold temperatures. If spring bulbs are used for forcing indoors, they must be pre-cooled, or they will not bloom.

Blooming Season

By planting both spring- and summer-flowering bulbs, the blooming season can be extended. Spring-flowering bulbs normally start blooming in February with snowdrops and end in June with the alliums. The summer bulbs extend the bloom period from July into the fall.

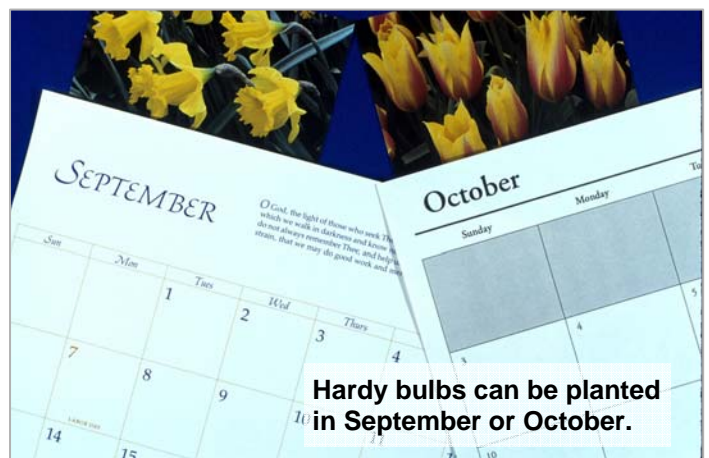
Obtaining Bulbs

Select good quality bulbs for planting. Factors to consider are size and firmness. Larger bulbs produce larger blooms. Select bulbs that are firm and free from soft spots, rotting spots, or other signs of disease.

There are basically three sources for obtaining bulbs: mail order, local nurseries, and discount businesses.

Normally, there is a larger selection of bulb varieties through mail order catalogs. The disadvantage of mail order is that you do not know what the bulb will look like until it's received. So, always buy from companies that have a good reputation or from those that you or your friends have used in the past with good results.

Once bulbs are obtained, plant them as soon as possible. If the bulbs cannot be planted immediately, keep them cool until they are planted. The pre-planting storage temperature should be between 50°F and 60°F. Keep the bulbs away from ripening fruits which may produce ethylene and cause flowering disorders, especially with tulips.



Planting Location

Before selecting the location to plant bulbs, consider the light requirements of the plant. Does the plant require full sunshine, partial shade, or full shade? Early spring-blooming bulbs can be planted successfully under deciduous trees or shrubs. They should not be planted under evergreen trees or shrubs that block the sunlight.

Spring bulbs planted on a south slope will bloom earlier than the same bulbs planted on a north slope. Spring bulbs planted on a hillside will bloom earlier than bulbs planted in a valley. Cold air is heavier than warm air and behaves like water. It flows down the slope, settling in low areas.

Preparing the Soil

Properly preparing the soil for bulb planting is important. Good soil drainage is essential in raising bulbs. If you have a soil with high clay content, it can be improved by adding compost or some other source of organic material. The organic material should be worked in the top 12 inches of soil (18 inches is even better).



Planting Depth

The general rule of thumb for planting spring bulbs is to plant two to three times as deep as the bulb is tall. This means most large bulbs like tulips or daffodils will be planted 6 to 8 inches deep, while smaller bulbs will be planted about 4 inches deep. Planting depth is measured from the bottom of the bulb. This rule of thumb on planting depth does not apply to summer bulbs, which have varied planting requirements. For planting depth of summer bulbs, check the information supplied with the bulbs.

Plant tulips, daffodils, and hyacinths with the nose of the bulb upward and the root plate downward. The best method of planting is to excavate an entire bed or trench to the proper depth. Press the bulbs into the soil in the planting area and cover with soil. In establishing a naturalized planting, without deep bed preparation, the bulbs may be planted one by one using a bulb planter or auger. Soil mixed with fertilizer can be layered into the bottom of the hole prior to planting.

Fertilization

The optimal soil pH (acidity level) range for bulbs is 6 to 7. A soil test of the planting area is necessary to determine whether limestone needs to be applied to adjust the soil pH. Limestone should be worked into the soil prior to planting.

Both spring and summer bulbs need phosphorus to encourage root development. Keep in mind that phosphorus moves very little once applied to the soil. Some bulbs are planted 6 to 8 inches deep. That means the phosphorus should be mixed in the soil below where the bulbs will be located so it can be utilized by the bulb roots. Mix bonemeal or superphosphate with the soil in the lower part of the planting bed as it is being prepared.

At planting, mix into the soil 5 tablespoons of 10-10-10 liquid soluble fertilizer (or equivalent bulb fertilizer) plus 2 cups of bonemeal per 10-square-foot area. As soon as the shoots break through the ground in the spring, repeat the above soluble fertilizer application. Do not fertilize spring-flowering bulbs after they have started flowering. This tends to encourage the development of bulb rot and sometimes shortens the life of the flowers.

Summer-flowering bulbs should be fertilized monthly from shoot emergence until the plants reach full flower. Apply 7 tablespoons of 10-10-10 soluble fertilizer (or equivalent bulb fertilizer) per 10-square-foot area.

Watering Bulbs

Water bulbs as soon as they are planted. This will help settle the soil in the planting bed plus provide needed moisture for the bulbs to start rooting. Fall planted bulbs must root before cold weather. Avoid excessive watering at planting time since this can result in bulb rot.

For both spring- and summer-blooming bulbs, if the spring has been dry, start watering when the flower buds first appear on the plant. Shallow watering will not do

the job. Remember that the bulbs may have been planted 6 to 8 inches deep and the water needs to soak to that depth. Through the bud and bloom stage, add about 1 inch of water per week if this amount has not been supplied from rainfall. Water with a soaker hose to keep water off the bloom. Bulbs such as alliums or shallow-planted bulbs will rot quickly if over-watered in the heat of summer.

Mowing Foliage

One of the visual problems with spring bulbs is the foliage that remains after bloom. The foliage can become unsightly if the bulbs are planted in a public or highly visible area of the landscape. Yet foliage should not be mowed off until it turns yellow and dies back naturally.

After flowering, the plant needs the green leaves to manufacture food (photosynthesis) which is stored in the bulb for next year's growth. If you mow off the foliage early, the plant can no longer manufacture nutrient reserves for next year. This results in small, weak bulbs which will bloom poorly and gradually decline and die.

The foliage on the smaller bulbs such as snowdrops and squill will die back rapidly and cause little problem. The foliage on the larger bulbs like tulips and daffodils will take several weeks to die back.

There are several ways to divert attention from the yellowing bulb foliage. Place bulbs behind the plants on the front edge of a border planting. Plant taller flowering bulbs behind lower growing foreground shrubs. Planting bulbs with groundcovers and perennials like hosta or daylilies will help camouflage the foliage. Inter-planting a bulb bed with annuals is usually not effective because of slow annual growth in the spring.



Mulching

Cover the bulb bed with 2 or 3 inches of mulch. Mulch will help minimize temperature fluctuation and maintain an optimal moisture level in the planting bed. The small, early blooming bulbs such as aconite and snowdrops should not be mulched.

Staking

Some of the summer-blooming bulbs like dahlias and gladioli occasionally need extra support to remain erect. A support ring is an easy way to support plants that have weak stems. Stakes will also work for this purpose. Drive stakes in place at planting time to avoid accidental damage to the bulbs.



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Digging Bulbs

Once the foliage matures and dies back in the late spring or early summer, the bulb is dormant. Summer is the dormant period for spring bulbs. As the foliage dies, the roots that nourish the bulb also die back. With fall rains, the bulb comes out of summer dormancy, and roots begin to grow again to provide nutrients and moisture.

Once spring bulbs enter dormancy, the time is right to dig the bulbs if needed. If the flowering of the bulbs was satisfactory, do not disturb them.

Every five years daffodils and crocus should be dug and replanted. The first sign of overcrowding is a decrease in flower size, uneven bloom, and uneven plant height. When this occurs, dig, spread bulbs out, and immediately replant them.

Storage

The bulbs that require protected storage over the winter are the summer-blooming bulbs that must be dug in the fall to prevent freezing. Spring-flowering bulbs may only require storage for a short period of time after purchase if weather conditions prevent immediate planting.



Bulbs that need to be stored through the winter should be kept at temperatures between 60°F and 68°F. Try to keep the humidity in the storage area as low as possible. Never store bulbs in an area where ethylene gas produced by fruit is present.

Bulbs can be stored in a container with peat moss, perlite, vermiculite, or shredded paper. Another common storage method is to place the bulbs in a very loose knit sack and hang in a sheltered, cool area. Do not divide or separate bulbs before storing them.



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