



Forcing Flower Bulbs

Bulb forcing can bring the bright colors and fragrances of spring indoors during winter. Daffodils, tulips, hyacinths, crocuses, and other spring flowering bulbs can be forced indoors from December through March. Paperwhite narcissuses are also forced indoors.

Choosing bulbs

Purchase bulbs from a local garden center as soon as they arrive in fall. Bulbs are generally available from September through November. Bulbs also can be purchased from mail-order nurseries.

Choose bulbs recommended for forcing; see list on page 3. They should be large, firm, and unblemished. So-called “bargain” bulbs and damaged bulbs may bloom poorly. Large, high quality bulbs produce the largest, most attractive flowers.

Planting

Most bulbs are forced in a well-drained, commercial potting mix. Gardeners can prepare their own medium by mixing one part garden soil, one part sphagnum peat moss, and one part perlite.

Containers for forcing may be metal, ceramic, plastic, or clay. Almost any container is suitable as long as it has one or more drainage holes and is twice as deep as the bulbs to be planted.

The first step in planting is to partially fill the container with potting soil. Then place the bulbs on the soil surface.

Adjust the soil level until the bulb tips are even with the rim of the container. Generally, 3 hyacinths, 3 to 5 daffodils, 5 to 7 tulips, and 10 to 12 crocuses will fit in a 6-inch-diameter pot. Once the bulbs are in place, add additional potting soil until the bulb tips show just above the soil surface. The level of the potting mix should be $\frac{1}{2}$ to 1 inch below the rim of the container. After potting, water each container thoroughly. Water the newly planted bulbs from the top or partially submerge the pots in a tub of water until the soil surface is wet. Finally, write the name of the bulb variety (cultivar) and planting date on a label and insert into each pot.

Different types of bulbs can be planted in a single container for a colorful indoor display. For example, crocuses or grape hyacinths can be planted in a container with tulips or daffodils. The larger bulbs are planted first and completely covered with soil. The smaller bulbs are then planted on top of the larger bulbs.





How to Plant



1. Choose a container that has drainage holes and is twice as deep as the bulbs to be planted.



2. Partially fill the container with potting soil.



3. Arrange the bulbs on the surface of the potting mix. Avoid injuring the bulbs; don't press them into the potting soil.



Plant flat-sided bulbs, such as tulips, with the flat side facing the edge of the container. This allows the first leaves to form a border around the edge of the pot. Tulips are more attractive when planted densely (about 5 to 7 bulbs per 6-inch pot).



4. Fill the container with additional potting soil to within $\frac{1}{2}$ to 1 inch of the container's rim. The tips of the bulbs should stick above the potting mix.

Paperwhite narcissus

Paperwhite narcissus do not require a cold storage period to flower. They may be grown in potting soil or in a pebble-filled tray at 60 to 65°F. Flowers can be expected in 5 to 6 weeks.



Hyacinths

Hyacinths are quite handsome when planted singly in a 4-inch pot. Three hyacinth bulbs would be appropriate for a 6-inch pot.

Pre-cooled hyacinth bulbs may be grown in water-filled, hourglass-shaped vases called hyacinth glasses.



Bulbs recommended for forcing

Crocuses

Cultivar

Flower Record
Jeanne d'Arc
Mammoth Yellow
Pickwick
Remembrance

Color

purple
white
yellow
white with blue stripes
lavender

Daffodils

Cultivar

Barrett Browning
Bridal Crown
Carlton
Dutch Master
Flower Record
Geranium
Ice Follies
Las Vegas
Mount Hood
Tête à Tête
Unsurpassable

Color

white, orange cup
double, white, orange center
golden yellow
golden yellow
white, orange-rimmed yellow cup
white, orange cup
white, creamy yellow cup
white, canary yellow cup
ivory white
yellow miniature
yellow

Grape Hyacinths (Muscari)

Cultivar

Blue Magic
Blue Spike

Color

blue bicolor
double, blue

Hyacinths

Cultivar

Amethyst
Blue Jacket
City of Haarlem
Delft Blue
Gipsy Queen
Jan Bos
Peter Stuyvesant
Pink Pearl
White Pearl
Yellow Queen

Color

lilac purple
navy blue
soft primrose yellow
porcelain blue
salmon apricot
pinkish red
blue purple
deep pink
white
yellow

Paperwhite Narcissus

Cultivar

Bethlehem
Galilee
Grand Soleil d'Or
Inbal
Nir
Ziva

Color

creamy white, yellow cup
pure white, moderate musk fragrance
yellow, orange cup, fruity fragrance
white, mild, pleasant fragrance
white, moderate musk fragrance
pure white, strong musk fragrance

Tulips

Cultivar

Abba
Angelique
Annie Schilder
Apricot Beauty
Attila
Bestseller
Calgary
Christmas Marvel
Couleur Cardinal
Happy Family
Kees Nelis
Leen van der Mark
Merry Christmas
Monte Carlo
Negrita
Passionale
Prinses Irene
Shirley
Strong Gold

Color

double, tomato red
double, pink
orange
apricot
light purple violet
coppery orange
white
cherry pink
deep scarlet
multi-flowering, rose pink
red-edged yellow
cardinal red-edged white
crimson red
double, yellow
reddish purple
lilac purple
orange with purple flames
white-edged purple
primrose yellow





Chilling

After planting, the potted bulbs need to be exposed to temperatures of 40 to 45°F for 12 to 16 weeks. The bulbs will not bloom properly without the cold period. Critical root growth and flower development occur during this period.

The best places for cold storage are a refrigerator, cool cellar, or an outdoor trench. For best results, do not allow the bulbs to freeze, water the bulbs regularly throughout the forcing period, and keep them in complete darkness.

If chilling in a refrigerator where apples or other fruit also are being stored, first place the potted bulbs in a plastic bag. Ripening fruit, such as apples, give off ethylene gas that can inhibit flower development and plant growth. During cold storage, remove the plastic bag containing the potted bulbs approximately once a month. Open the bag for 1 to 2 hours to allow for air exchange, then reseal the plastic bag and place it back in the refrigerator.

Annual flower beds and vegetable gardens are possible sites for outdoor storage. In late October or November, dig a trench that is at least 1 foot deep and wide enough to accommodate the containers. Place the pots in the trench, cover with straw, and place a tarp over the area.

After 12 weeks of cold storage, roots should be visible through the drainage holes. Also, yellow shoots should have begun to emerge from the bulbs.

If the bulbs are at the proper stage of development after 12 weeks, move the containers to a warmer (50 to 60°F) location that receives low to medium light. Leave them in this area until the shoots turn green, usually 4 to 5 days. Then move them to a brightly lit, 60 to 65°F location. Keep the plants well watered. On average, bulbs will flower 3 to 4 weeks after removal from cold storage. For a succession of bloom during the winter, remove a few pots from cold storage every 1 to 2 weeks.

After blooming

Tulips, hyacinths, and most other spring flowering bulbs are usually discarded after forcing. Most don't bloom again when planted outdoors and attempts to force them again are usually unsuccessful. Daffodils, however, are an exception. Many forced daffodil cultivars perform well when planted outdoors. Paperwhites are not hardy outdoors and should be discarded after flowering. Hyacinths forced in hyacinth glasses also should be discarded.

The care after flowering is important if attempting to save forced bulbs. After flowering, remove the spent flowers and place the plants in a sunny window. Water regularly until the foliage begins to yellow. At this point, gradually withhold water until the foliage withers and dries. Carefully remove the bulbs from the potting soil, allow them to dry for 1 to 2 weeks, then store them in a cool, dry place until fall planting.

Revised by Richard Jauron, extension horticulturist.

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