

# Growing Bulbs in Containers

You can easily brighten up your patio, deck, or window boxes in late winter and early spring with containerized bulbs. The quick growth and flower development make bulb forcing a fun and rewarding project that is great to do yourself or with kids.

**Special Note:** Tulip and Hyacinths bulbs must first be chilled by storing them at 35-45° F, such as in a refrigerator crisper drawer, for a minimum of 4 weeks, 6 weeks is ideal. This can be done after you have planted them in the container if space in your refrigerator allows. It's important to avoid storing bulbs near ripening fruit; the fruit gives off ethylene gas which can damage the flower inside the bulb. Once removed from cool storage, plant bulbs immediately; they may be planted anytime from November through January. Regardless of when they are planted, they will bloom in late February/March. Remember only tulips and hyacinths need to be chilled.

## Here's How to Force Bulbs Outdoors:

1. You will need the following materials: bulbs, soil, and a container. Almost any bulb can be grown in a container. It is common to mix several types of bulbs in the same container by layering them with the largest bulbs near the bottom and smaller ones near the top.

2. Choose a container that will suit your needs; a shallower one for single flower type plantings and a deeper one for mixed type plantings. Most any container can be used as long as it has a hole for drainage. Use a potting soil that drains freely but freely absorbs moisture. We prefer to use Master Nursery's Professional Potting Soil.

3. Choose healthy bulbs. Avoid bulbs that are dry and withered, spongy or moldy. In general, the larger the bulb for its type, the more flowers.

4. Pre-chill your bulbs if needed. (see the Special Note above)

5. Moisten the soil and fill the container with at least 2 inches of potting soil and place the first layer of bulbs. Place your bulbs so that they are close together but not touching. Cover the bulbs with at least 1-2 inches of soil. If you are not layering your pot, be sure that the bulb has the appropriate amount of soil covering it. Planting depth is typically based on the size of the bulb and should be covered with a minimum of two times the height of the bulb: i.e., a 1 inch tall tulip should be covered with 2 inches of soil.

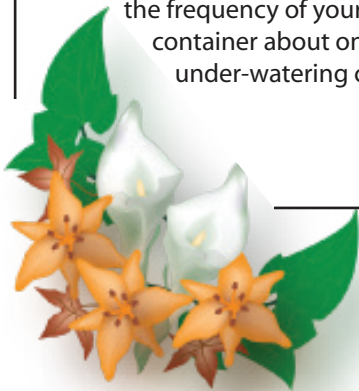
If doing multiple layers, add the next layer of bulbs; place carefully so that you do not place a bulb directly above one in the lower level. Once again, cover with 1-2 inches of soil and repeat.

6. Water the planted container thoroughly and set in a cool spot out of direct sun for 2-3 weeks; this will allow the bulbs to root in before the top growth begins. Move the container to a bright spot after this period. Be sure that the soil remains moist but not wet throughout the entire growth cycle of the pot.

7. You can add additional color to the pot by over-planting the bulbs with Pansies, Isotoma, grass, Baby Tears, Primrose, and other low growing, blooming plants. When over-planting with color, place the pot directly into a brightly lit spot.

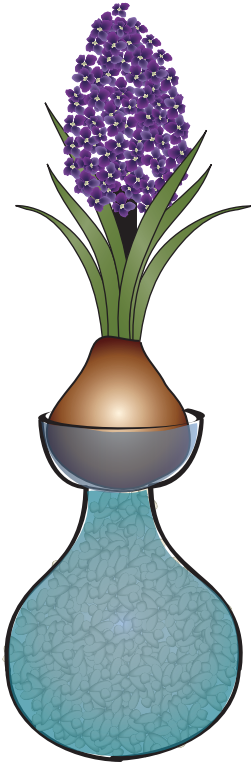
## Additional Tips:

When plants are forced in this manner, they are typically treated as annuals. If you would like to get more than one season out of your container, start feeding with a water soluble fertilizer (which is formulated for bloom production) at the first sign that the bulbs have sprouted. Repeat every 2-3 weeks until the bulbs have gone dormant. Remove the spent flowers to prevent the plant from setting seeds and allow the foliage to die back naturally. If the foliage has not died back within 4-6 weeks of bloom, slowly reduce the frequency of your watering until the leaves brown. Store the container in a cool, dry place. Be sure to lightly water the container about once a month; you want the soil to remain barely moist to slightly dry. Over-watering can cause rot, under-watering can cause the bulb to die.



# Forcing Bulbs Indoors (Water Forcing)

Indoors, a decorative container with paperwhites will fill an entire room with sweet fragrance and brightly colored tulips or Daffodils will cheer up any rainy, gray day. The quick growth and flower development make bulb forcing a fun and rewarding project that is great to do yourself or with kids.



## Special Note:

As with planting tulips and hyacinths outdoors, they must first be chilled by storing them at 35-45° F, such as in a refrigerator crisper drawer, for a minimum of 6 weeks and up to 14 weeks. This can be done after you have planted them in the container if space in your refrigerator allows. It's important to avoid storing bulbs near ripening fruit; the fruit gives off ethylene gas which can damage the flower inside the bulb. Once removed from cool storage, bulbs must be planted immediately. Remember, only tulips and hyacinths need to be chilled.

## Here's How to Force Bulbs Indoors:

You will need the following materials: bulbs, containers, and a planting medium, such as, gravel, marbles, sand, or Legos; be creative. The best bulbs for forcing indoors include paperwhites (see additional notes at the bottom of the page), tulips, amaryllis, hyacinths, daffodils, and crocus. Unlike forcing bulbs for outdoor use, it is best to stick with a single type of bulb in each container because of the importance of planting depth and the level that the water should be maintained in relation to the bottom of the bulb; if you would like to mix different types in the container, try to select types that have similar sized bulbs.

1. Choose healthy bulbs. Avoid bulbs that are dry and withered, spongy, or moldy. In general, the larger the bulb for its type, the more flowers. Pre-chill your bulbs if needed. (see the Special Note above)

2. Fill your container with the medium of choice; leave just enough room so when the bulbs are placed in the container, the growing tip is even with the top of the container. Exclude this step if you are using a specially designed bulb forcing vase that has a restriction at the top designed to hold the bulb above the water.

3. Place the bulbs in the container; be sure that they have about 1/2 inch space between the bulbs as they will rot if they touch.

4. Cover the bulbs with the medium to help stabilize the bulb as growth begins; allow the growing tips to remain above the medium.

5. Fill the container with water to a level just below the bottom of the bulbs. Do not allow the water to remain in contact with the bulb as they will rot; it is best to have the water 1/3-1/2 inch below the bottom of the bulb; the roots will emerge and find their way to the water.

6. Place the completed container in a cool, dark place to allow root development; once started, move to a bright, well lit spot; if you are forcing tulips or hyacinths, refer to the special notes above.

## Additional Tips:

When growth begins, it is best to keep the bulbs in a spot with very bright light; be sure to turn the container every two days to keep the growth straight as the plant will want to grow toward the light.

## Paperwhite Notes:

Paperwhites will often stretch and become floppy when forced in the warmth of our homes. Follow these easy steps to keep your paperwhites compact and upright.

- Once the roots begin growing and the green shoot on top reaches about 1-2", pour off the existing water.
- Replace the water with a solution of 4 - 6% alcohol, as described below. Continue to use the alcohol solution for future watering; you should see results in a few days.

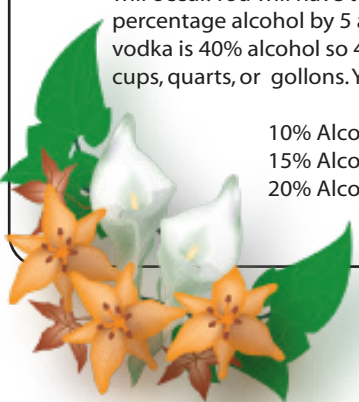
## How to Make the Alcohol Watering Solution

Many liquors are only labeled as "proof", not percentage of alcohol. Don't confuse the two. To determine what percentage alcohol you have, divide the proof in half, so an 86 proof bourbon is 43% alcohol. You can use any hard liquor or rubbing alcohol; don't use wine or beer because they are too high in sugar. The alcohol content needs to be less than 10% or your plants will overdose and severe growth problems will occur. You will have to do some math to get the solution down to 4-6% alcohol. To convert your booze to 5% alcohol, just divide the percentage alcohol by 5 and then subtract 1. That will tell you how many parts water to mix with your 1 part alcohol. Example: an 80 proof vodka is 40% alcohol so 40 is divided by 5 equaling 8; 8 minus 1 = 7... so, mix 7 parts water to 1 part alcohol. The parts can be tablespoons, cups, quarts, or gallons. You can simply use this chart to convert your alcohol to a 5% solution for watering.

10% Alcohol = 1 Part Water to 1 Part Alcohol  
15% Alcohol = 2 Parts Water to 1 Part Alcohol  
20% Alcohol = 3 Parts Water to 1 Part Alcohol

40% Alcohol = 7 Parts Water to 1 Part Alcohol

25% Alcohol = 4 Parts Water to 1 Part Alcohol  
30% Alcohol = 5 Parts Water to 1 Part Alcohol  
35% Alcohol = 6 Parts Water to 1 Part Alcohol



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