

## FORCING BULBS FOR INDOOR BLOOM

Enjoying beautiful color and fragrance during the winter months from forced bulbs is easy with a little preparation and an afternoon of potting during the fall. Forcing is actually not the best word for this process: manipulating, coaxing or influencing the bulbs to bloom on your schedule instead of their natural timing is more appropriate. Many different types of spring blooming bulbs can be forced into early bloom, although some work better than others. Pots can be planted with several different types together or one single variety per pot.

There are 4 steps to this process and very few special materials are required.

Step 1: Purchasing and storing spring bulbs: Always choose firm bulbs with no signs of mold or rot. Choose the largest size bulbs available for the best show. Store bulbs in a cool dry spot until you are ready to begin chilling.

Step 2: Potting Choose a clean pot, either plastic, clay or ceramic as long as it has drainage holes. Pots that are wider than high work best and for most bulbs a pot of 4-6" in depth works fine. There should be at least 2" of soil under the bulbs. For potting soil, any mix that contains a good amount of peat moss, potting soil, sand, and perlite or vermiculite will work (it's wise not to use garden loam or soil unless you sterilize it so that you are not introducing insects into your home). Fill the pot with soil to a level where the largest bulbs you are working with will sit so their tops are just slightly above the rim of the pot. Place the largest bulbs into the pot and add soil to the level where the next size bulbs will be just above the rim. Continue in this manner until all bulbs are in. Fill in around the bulbs with soil until the pot is just full. Water gently from above or let pot sit in a saucer of water for several hours until all the soil is moist. The soil level should sink a bit so that it is just below the rim of the pot and the bulbs are at the rim level.

Notes about potting: -Place tallest bulbs in the center

- Bulbs with a flat side such as tulips should be potted with the flat side facing the edge of the pot so their large leaf will drape over the pot gracefully.
- Don't push bulbs into the soil when potting; if they are too high, remove some soil from underneath.
- Marbles, decorative rocks, pebbles or stones can be used as growing media instead of soil for most bulbs.
- You get the best show when bulbs look crowded, they can be potted so they are almost touching in the pot.
- Tulips, daffodils and hyacinths should have their bulb tips just showing, small bulbs should be buried by 1/2".
- Clay pots should be saturated before potting.
- Hyacinth bulbs may irritate some people's skin so gloves are a good idea when handling them.

Step 3: Chilling: This is the time when the tricking happens to convince bulbs they have spent their winter outdoors and should begin growing and flowering. They must be now be placed in a spot that is 40-45°F. This can be a refrigerator (but not near any ripening fruit as the ethylene gas will adversely affect the bulbs) or in a crawl space, basement or unheated garage. Any space is fine as long as it is consistently cool and does not drop below 34°F. It is during this cooling period that the important root growth occurs. You will know that the cooling is completed when most of the recommended time is up and there are small white roots emerging from the drainage holes and the top shoots are 1-2" long. They should also be in the dark, so you may need to cover with a box or dark fabric. A box can also protect from rodents if in an open location.

To chill bulbs dry: keep them in a mesh bag or a paper bag with a few holes. Once all or some of the weeks of necessary chilling are completed, you can pot the bulbs and then finish the chilling period.

Notes about chilling: -Longer chilling times are ok; shortening chilling is usually not successful.

- For a succession of bloom, remove 1-2 pots weekly from the chilling area to grow on.
- Keep the pots consistently moist but not soggy wet.
- In New England, it is hard to find a spot outdoors that does not freeze but it is possible to use a well-insulated cold frame or trench.
- Use caution-placing bulbs in the refrigerator; many spring bulbs are poisonous if ingested.
- Use a thermometer to test the location for chilling and remember that lower floor spaces are usually cooler than tabletops or shelves.
- Put a note on your calendar to remind you when to move bulbs from the chilling area and plan a party for the week they will bloom to show off your beautiful successes!

Step 4: Top growth: Once the chilling is complete, move the pots to a spot that receives indirect light and is between 55-65°F for 1-2 weeks. If you did your chilling without planting the bulbs, you can pot them up as above and begin the top growth now. You should start to see growth of the stems and it should be light green. Next, they should be moved to a spot where they get direct sun for 1-2 weeks until blooms begin to show. The cooler the temperature during these stages, the shorter your bulbs will stay. A drafty windowsill that you curse most of the time is perfect for forcing bulbs! Once color is showing, they can be moved to indirect light and enjoyed!

Notes about top growing:

- Turning pots in the sunlight frequently will keep the foliage and bloom stems straight and strong.
- Fertilizer is not necessary during this first bloom time, but if you choose to grow on the foliage for planting in the garden fertilize as below.

After the blooms are finished, it is possible to grow on the foliage and save the bulbs for later planting in the garden. Just as you do outside, fertilize (half strength liquid weekly), water (keep soil evenly moist not soggy) and maintain the foliage in sun until it browns and dies off. You can then plant the bulbs in the garden or hold the pots in a cool spot until spring. Most bulbs, except tulips, will come back in the garden after forcing but may not have a spectacular show their first season. It is not usually possible to force bulbs a second time.

Weeks of cooling required:

Crocus 14-16 weeks then 2-3 weeks to bloom

Daffodils dwarf varieties best; taller varieties need deeper pots 12-16 weeks then 2-3 weeks to bloom

Hyacinths 11-14 week then 2-3 weeks to bloom

Iris reticulata or danfordiae 8-12 weeks then 2-3 weeks to bloom (these are best kept below 65°F for entire growing period)

Tulips 12-15 weeks then 3 weeks to bloom

Scilla/Muscari 10-16 weeks then 2-3 weeks to bloom, use lots of bulbs per pot