



Forcing Bulbs and Flowering Stems

BULBS

Spring flowering bulbs can be forced to bloom early and indoors; the best types to use are listed below. When you "force" bulbs you are actually fooling them so they bloom indoors and out of season. By simulating the natural conditions that bring them into flower, bulbs can bloom months before their usual cycle. In horticulture, we refer to this as "stratification" or artificial exposure to the conditions required for the dormant bulbs or seeds to grow and bloom. This can be done by forcing your plants into dormancy by placing them in a cool (45-55°F), dark location. The bulb will need to go through a resting period for approximately eight to twelve weeks before it can be forced to bloom again. During that time, do not water the plants. Once the leaves turn yellow, they can be removed.

There are four stages of growth that must be duplicated for bulbs to bloom:

1. Dormancy (no growth). Plant the bulbs at this stage.
2. Root growth. Light is not necessary. Temperature should be around 45°F. Temperatures below 35°F stop root growth. Temperatures above 55°F encourage top growth too early.
3. Top growth begins. Provide light and temperatures between 55-65°F for two to three weeks.
4. Flowering. Warmer temperatures of about 68-75°F, stimulate flowering.

Tips

- For planting medium, use 2/3 commercial potting soil and 1/3 sand.
- Use clean pots with drainage holes. Size depends on bulbs being grown. Allow at least 2 inches of soil below bulb. The top of the bulb(s) should be at the top of the soil surface.
- Several bulbs can be planted close together in the same pot for a very showy bloom.

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- Different kinds of bulbs require different periods of time to root. Don't combine different bulbs in the same pot unless they have the same rooting times and cultural requirements.
- Label each pot with the variety name, planting date and approximate date to bring out of cold storage.
- Temperatures must be between 35-50°F to produce a good root system. If keeping bulbs indoors, choose a cellar, unheated garage or basement, refrigerator or ventilated crawl space. Exclude light with tarps or boxes. Outdoors, pots can be sunk in the ground on the east or north side. Cover with several inches of mulch to exclude light and protect from temperature extremes. Pots can also be buried in a cold frame. Spread about an inch of gravel in the bottom and set pots on top.
- Keep planting medium barely damp. Maintain for ten to sixteen weeks, depending on variety.
- Check pots regularly as date approaches looking for roots and development of small shoots. Bring bulbs into the light in temperatures around 55-65°F when roots and shoots form.
- Water when soil is dry to the touch.
- In a week or two, when shoots are several inches tall, move into bright light and temperatures of 68°F or above. Bulbs will bloom in about two weeks.

After blooming, most bulbs cannot be forced again, but hardy ones can be planted outdoors. Leave the foliage intact and plant out in the spring. While they are usually discarded, you can try planting potted bulbs that were forced to bloom. Make sure they get plenty of sun and let the foliage die back naturally. Bulbs can then be planted once dormant or in the fall. The bulbs will like only produce leaved the first year then flower the second or third year.

Here is a list of bulbs, ease of forcing, rooting period and special instructions:

Paper-white narcissus: Very easy. No cooling or rooting period. Grow in soil (listed in Tips) or gravel. Plant the third week of November for Christmas bloom. Not hardy.

Amaryllis: Very easy. No cooling or rooting period. Start mid-November for Christmas bloom. Water sparingly until growth begins, then water as needed to keep soil moist. Not hardy.

Crocus: Easy. 14-16 week rooting period. Can be potted in soil or gravel and water. Hardy.

Hyacinth: Easy. 12-14 week rooting period. Can be potted in soil or forced in special hyacinth vase using water only. Very fragrant blooms. Hardy.

Colchicum (Autumn crocus): Easy. Will even grow and bloom without soil or water. Placed on a windowsill, will bloom in two weeks or so. Hardy.

Muscari (*Grape hyacinth*): Easy. 16-week rooting period. Put numerous bulbs in one pot since they are very small. Hardy.

Iris: Medium. Small irises or Dutch force best. Need good drainage, cold period of 35-45 degrees and about 15 weeks of rooting. Half hardy.

Tulips: Difficult. Tulips need a **minimum** 15-week rooting period at a **consistent temperature**. Choose shorter varieties such as species tulips (*T. humilis* or *T. puchella*). Taller varieties that force well include 'Apricot Beauty', 'Attila', 'Bing Crosby', 'White Dream', 'Princess Irene', 'Dream World', 'Shirley', 'Peach Blossom', 'Merry Widow' and 'Jingle Bells'. Prefer clay pots. Hardy.

Daffodils: Difficult. Small or miniature varieties do best. 12-14 week rooting period. Daffodils require **very** bright light during top growth and flowering period. With insufficient light, daffodils will be leggy with no flowers. Hardy.

Easter Lilies: Greenhouse growers have forced the perennial Easter lily. Replant in spring. Dormancy gives way with little watering to shoots. Keep moist after blooming. After wilting, cut the stalk, not the leaves. Continue to water and fertilize every 2-4 weeks with a balanced liquid houseplant fertilizer. At the end of summer, stop watering. Once remaining leaves die, place the bulb in a cool, dark location for 2 months. Plant so that 1/3 of the bulb is above the potting soil level. Half hardy (not winter hardy in Spokane)

Fertilize your bulbs

Spring blooming bulbs can be fertilized once they are done blooming, although the best time to fertilize is when plants begin to emerge. Look for a fertilizer high in phosphorous (middle number) and low in nitrogen (first number), such as 5-10-5. Fertilizers are generally applied at 1-2 pounds per 100 square feet. Make sure to gently work or water the fertilizer into the soil. If you are unsure if you need fertilizer, conduct a soil test.

CUT BRANCHES

Branches can be forced to bloom or leaf out prematurely. Try any deciduous flowering tree, shrub or vine. Plants that do particularly well are Japanese maple, flowering quince, forsythia, dogwood, witch-hazel, hawthorn, daphne, saucer magnolia, mock orange, pussy willow, spiraea and wisteria.

Tips

- Cut branches from mid-January to early spring. If done earlier, buds will not have had sufficient chilling time.

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- Choose heavily budded, sturdy branches. Thicker stems produce more flowers. Cut fairly long because they will need to be recut a few times.
- Use a sharp blade and cut on the diagonal.
- Think about the shape of the plant when you remove branches as though you are pruning.
- Peel bark back from the base of cut stem and split up 2-3" inches. Remove lower twigs.
- Sink stems into deep containers of room temperature water. Place containers in warm, humid area such as a kitchen or bathroom.
- Change water every few days and recut stems occasionally.
- To prolong bloom period, keep branches out of direct sun
- Growth usually begins in one to eight weeks depending on type of plant.
 - Forsythia and Pussy willow usually take one to three weeks to bloom
 - Magnolias usually take three to five weeks to bloom