

Forcing Bulbs



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Forcing Bulbs; UW Madison Extension Horticulture	Forcing bulbs indoors; Clemson Extension
Amaryllis; Clemson Extension Forcing Bulbs, Virginia Master Gardener	Forcing Flower Bulbs; ISU Extension- Note: List of recommended cultivars

What is forcing? Forcing is making it bloom at an unnatural time. Another example is when you bring lilac branches inside for indoor flowering.

Definitions

Bulbs

Bulb is often used as a generic term for bulbs, corms, tubers, and rhizomes. It is an embryonic plant; the purpose of the structure is to store food for the plant as it grows.

Bulb

- True bulbs are layered on the inside, much like an onion and most have a protective tunic (papery) layer covering the outside of the bulb.
- They have a basal plate from which the roots emerge and are usually round or egg shaped with a pointed end from which the leaves emerge.
- Examples: **tulips**, daffodils, lilies, amaryllis

Corm

- Corms are compact modified stems.
- They are round and have a basal plate like a bulb, but are flatter in appearance.
- When corms become exhausted, they use energy from the growing leaves and stem to create a new corm. If you were to dig one up in the fall, you would find the spent corm, like a dried up prune, still clinging to the bottom of the new corm.
- Examples: Gladiolus, freesia and **crocus** all grow from corms.

Tuber

- Tubers are thick underground stems.
- They have no basal plate and some look like fat fingers
- Examples: Daylilies, Begonias; **dahlias**, anemones

Rhizome

- Rhizomes are swollen stems that grow horizontally, just under the surface of the soil and send up leaves and flowers at intervals.
- Examples: Iris, lily of the valley and **canna lily**.

Selecting bulbs

- **High quality large bulbs**; no soft spots. Firm. Forcing is stressful on the bulb. To have the best blooms, you want the highest grade, largest, firmest bulbs.
- **Choose shorter varieties**; won't flop as easily
- Varieties blooming time: Early, mid and late season. Keep in mind late season bloomers will need longer chilling times.
- Short blooming - tulip and crocus; long blooming- daffodils, grape hyacinth, dutch iris, hyacinths
- Bulbs that don't need a cold treatment: freesia, amaryllis, paperwhites

Selecting containers:

- Drainage HOLES!!!
- Bulb pans and azalea pots. Shallow and wide. 3-4 inches deep.
- Soak terracotta the night before planting to prevent the clay from drawing moisture from the potting media.

Potting media:

- Well drained potting media- either peat based or coir. Well draining is more important than high fertility. **Do not add fertilizer to potting media.**

Planting:

- Timeline: September-November
- Spacing for forcing- close together, ½ bulb width between bulbs. They will help each other by holding up each other's foliage.
- Tulip bulbs will have a flat side- place the flat side against the outside for a uniform look. This is where the leaf will emerge.
- Fill with potting media, firm into place, but don't pack.
- Don't forget to label if doing multiple types of bulbs with cultivar, chilling start and when to pull it up.
- Water well at planting. Add more potting media if it settles after watering.

Cold Treatment:

- Keep warm for a couple of weeks. This starts root development. Then move to 34-46F. Cold but not freezing.
- Be aware of fridges and garages: ethylene gas will cause the flowers to abort. Beware of ethylene from produce (especially apples) and car exhaust.
- Protect from light.

- During the chilling period, the plant undergoes biochemical changes. These changes are in root formation and stem elongation.
- Check periodically soil moisture. Moist, but not wet. Can wrap in a plastic bag to retain moisture but punch holes in the plastic so it can breathe.

Flower	Required cool period in weeks
Amaryllis	None
Crocus	12-14
Daffodil	13-15
Grape hyacinth	14-15
Dutch hyacinth	10-13
Paperwhites	None
Tulips	14-20

Forcing:

- Shoots should be 1-2 inches above the ground and white. They will turn green with light.
- Bring back into bright indirect light at 50-60F until you see active growth.
- Most will bloom 3-4 weeks once brought into warmer temperatures. Amaryllis will take 6-8 weeks to bloom.

Blooms last longer in cooler temperatures. Plants will grow faster in warmer temperatures, but blooms won't last as long. Keep in mind, as the leaves grow faster, you'll need to water more often.

You can prolong blooms by placing them in the fridge at night.
Don't keep blooms in direct sunlight, shorten the bloom period.

Hyacinth flowers may stay inside their bulbs and fail to grow a long stem. Place the plants in the dark for a few days or place a paper cone over the plants to draw the flower out of the bulbs.

Aftercare:

- Because forcing is so stressful on bulbs, they are often best composted or thrown away after flowering.
- If you want to experiment, keep watering the foliage plant after flowering.
- If daughter bulbs form, plant in spring or fall. Once dormant, store in cool dark space until you can plant in the fall.

- It is likely it will not flower the first year. It may flower in future years. Daffodils are the most likely to keep going.

Keep records. Include information like:

- Varieties that you force
- The length and temperature of cold treatment
- Weeks until bloom after cold treatment.