

Forcing Spring Bulbs Indoors

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Forced bulbs – bulbs made to flower at times that are outside of their normal bloom time

What is a bulb? _____

Types of bulbs:

- **Tunicate true bulbs** have a papery outer skin that protects the scales
Imbricate true bulbs have no papery outer skin and remain plump and moist
True bulbs examples - allium, amaryllis, hyacinth, daffodil, lily, onion, and tulip
- **Corms** – gladiolus, crocus, crocosmia, and freesia
- **Tubers** – caladiums oxalis, anemone, peony, daylily, dahlia, sweet potato, and potato
- **Rhizomes** – lily-of-the-valley, bearded Iris, canna, calla lily, water lily, and bamboo,

Healthy, blooming bulbs must first have _____, _____, _____, and vernalization

Vernalization is a period of chilling (like Winter) that bulbs require before blooming.

The easiest bulbs to force are amaryllis, paperwhites, hyacinths, daffodils, and crocus.

Healthy true bulbs are firm and still have the outer paper/skin on them.

Unhealthy bulbs are squishy, dry, or smelly

Supplies required for forcing bulbs:

- Light Soil Potting Mix (equal parts of potting soil, sphagnum peat moss, and vermiculite or perlite)
- Soil Container that drains well – may be clay, metal, plastic, or ceramic
- If forcing in water – choose either a bulb vase or a container that will hold water

Bulbs require vernalization (chilling time) in order to bloom – see attached chart

Additional tips:

- Vernalization of bulbs in soil - keep them lightly moist – never wet.
- Vernalization of bulbs in a mesh or paper bag - check bulbs periodically for moisture and mold, but do not let them dry out.
- Never store bulbs in plastic bags – they will rot
- Never chill bulbs in refrigerator with fruit (such as apples) – the ethylene gas that fruits produce will stunt the bulb blooms
- After the proper vernalization period, place bulbs in a warm location (60-65F) with indirect sunlight. Once shoots turn green, move them to a warmer, sunnier spot.
- Regularly rotate the bulb containers by ¼ turn to keep bulbs growing upright
- Once bulbs are blooming, move them to an area with indirect sunlight during the day and to a cooler place at night to extend the bloom time
- #1 Troubleshooting tip: bulbs cannot tolerate too much moisture, so always monitor moisture levels and stay on the drier side when in doubt

Bulbs that have bloomed:

- After bulbs planted in soil have bloomed indoors, they should be fertilized and then planted outdoors when the weather warms
- Bulbs that were forced in water will probably not bloom again
- Amaryllis can remain in their pots after they bloom, fertilize, cut the leaves off in the early fall, let them rest for two months, and start the process again

Website extension articles for more information:

- <https://extension.umn.edu/planting-and-growing-guides/growing-bulbs-indoors>
- https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/HORT/HORT-76/HORT-76.pdf
- <https://hort.extension.wisc.edu/articles/forcing-bulbs-2/>

Bulb catalog website for interesting cultivars:

- Springhillnursery.com
- Hollandbulbfarms.com

For Additional Questions:

Knox County Master Gardeners website: www.knoxcountymastergardener.org

Knox County Master Gardeners Facebook page: <https://www.facebook.com/KnoxCountyMG>

Ask-a-Master Gardener / Knox County Extension Helpline: (865) 215-2340

Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development.

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Vernalization Chart for Forced Bulbs

Table 2. Bulb Times for Forcing			
Common Name	Scientific Name	Cooling Time (Weeks)	Weeks to Bloom After Cooling
Amaryllis	<i>Hippeastrum</i> spp.	none	6-8
Dutch Crocus	<i>Crocus</i> spp.	12-14	2-3
Daffodil	<i>Narcissus</i> spp.	13-15	3-4
Checkered Lily	<i>Fritillaria meleagris</i>	15	3
Glory of the Snow	<i>Chionodoxa luciliae</i>	15	2-3
Grape Hyacinth	<i>Muscari armeniacum</i>	14-15	2-3
Dutch Hyacinth	<i>Hyacinthus orientalis</i>	10-13	2-3
Bulbous Iris	<i>Iris reticulata</i>	15	2-3
Paper White Narcissus	<i>Narcissus tazetta</i>	none	5-6
Siberian Squill	<i>Scilla siberica</i>	15	2-3
Snowdrop	<i>Galanthus nivalis</i>	15	2
Tulip	<i>Tulipa</i> spp.	14-20	2-3
Winter Aconite	<i>Eranthis hyemalis</i>	15	2

(Graine, George. "Fooing Mother Nature: Forcing Flower Bulbs for Indoor Bloom." HORT-76NP, Virginia Cooperative Extension Master Gardener, Fairfax County, VA
https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/HORT/HORT-76/HORT-76.pdf)

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