

HOME FORCING OF DAFFODILS (*NARCISSUS*)

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Causing spring flowering bulbs like Daffodils (*Narcissus*) to flower by other than naturally occurring conditions is called "Forcing." This is a practice carried out by commercial growers the world over. With a little care and effort, homeowners can have a steady supply of daffodils (*Narcissus*) from late December through April. Forcing bulbs should be a challenge to those who are interested in plants.

General Forcing Information

The steps involved in forcing are simple.

- (1) The proper forcing cultivars (cultivated varieties) must be selected for the desired flowering periods. This is necessary since all cultivars are not suitable for all flowering periods. Table 1 lists some cultivars which are best suited for forcing for the various months.
- (2) The bulbs must be planted, rooted, and given a cold-moist treatment for a minimum of 13 weeks with temperatures ranging from 35° to 48°F.
- (3) After being rooted and cooled, they should be placed in a well lighted 60 - 63 °F area in the home. On the average, the bulbs will take about 3 to 4 weeks to flower.

Materials Required

Bulbs - The selection of the proper cultivars for the desired period is very

important (Table 1). It is strongly suggested, since some cultivars may be in short supply, that bulb orders be placed with your bulb dealer in the spring to ensure that they will be ready to begin the forcing process in the fall.

Planting Medium - The purpose of the planting medium is to anchor the bulbs and to supply moisture. Thus, the planting medium must be well drained and yet retain sufficient moisture for growth of the bulbs. A good mixture would be: 1 part loamy soil, 1 part peat, and 1 part sand. Fertilizer should not be added to the mixture. The pH should be 6 to 7.

Containers - Use only clean pots with adequate drainage holes. Six- to eight-inch diameter pots can be used. If they have been previously used, clean and rinse the pots thoroughly. If they are new plastic pots, be sure the holes in the bottom or sides of the pot are open. When clay pots are to be used, it is advisable to soak them overnight prior to planting so they will not draw moisture from the planting medium.

Forcing Procedures

Handling of bulbs prior to planting - It is extremely important that all flower bulbs be handled with care at all times. They are living plants and should not be dropped or subjected to extremely high or low temperatures. After purchasing, keep

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the bulbs in well ventilated area. If they are in paper bags, open the bag to allow maximum air movement. If possible, store them in open trays. Keep the bulbs in a room with a temperature between 45° and 50°F. Bulbs can be stored for several weeks at these temperatures. Temperatures above 63°F should be avoided at all times.

Planting - Planting can take place any time from mid-September to December, depending on the desired date of flowering, and the type of storage used. As a general rule, for early flowering, plant early, and for late flowering, plant late. For flowering in late December, the planting must be done in mid-September. For February flowering, the bulbs should be planted in mid-October and for March and April, in mid-November. Remember the minimum length of the total cold treatment should be 13 weeks, and 15 weeks is preferred.

If the bulbs were held at 45° to 50°F (pre-cooled) prior to planting, count this time in the total weeks of cold given. Thus, if the bulbs were precooled for 3 weeks they only need 10 additional cold-weeks after planting.

When planting, the pot should be loosely filled with enough medium so the nose of the bulb will be even with the top of the pot. Place 3 to 4 daffodils in a 6-inch diameter pot and more in larger pots.

Do not press the bulbs into the medium! The medium under the bulbs should be loose so rooting will take place quickly. When covering the bulbs, do not fill the entire pot. Fill only to within ¼-inch of the top so the plants can be more easily watered.

After planting, label each pot with the name of the cultivar, date of planting, and the date to be placed in the house.

Cold Treatment - After planting, water the medium thoroughly and place pots in a refrigerator at 35° to 45°F. The medium should be kept moist through the rooting and cooling period. After 5 to 6 weeks, the roots should emerge out of the bottom of the pots. The shoots will subsequently emerge from the bulbs. Do not place fruit or any other ethylene-producing products in the refrigerator used for flower bulb storage and rooting.

Forcing the bulbs - After a minimum of 13 cold-weeks, the first pots may be placed in the house.

Longer cold storage will result in taller flowers, while storage shorter than 13 weeks will result in smaller plants and sometimes aborted flowers. If the first planting was made on October 1, the first plants may be taken into the house just before Christmas. For a continuous supply of flowers, bring in a few pots at weekly intervals.

In the house, place the plants in an area with a temperature of approximately 63°F. For best results, place them in direct sunlight. The plants will flower in about 3 to 4 weeks. Once the flowers begin to open, take the plants out of direct sunlight. The flowers will last longer. Since the bulbs contain enough plant food, it is not necessary to fertilize them. Unlike most flower bulbs which have been forced indoors and are usually of little value for outdoor plantings, forced Daffodils (*Narcissus*) can be removed from the pot and placed outdoors in climatic zones 4 to 8. Do this in early spring. Most of them will flower 1 to 2 years later.

Table 1. Daffodil (*Narcissus*) Cultivars for Forcing.

January and February	March and April
Yellow - Carlton, Dutch Master, February Gold, Peeping Tom, Tête a Tête, Unsurpassable	Yellow - Dutch Master, Osiris, Prizewinner, Unsurpassable
Bicolor - Barrett Browning, Fortune, Jack Snipe, Juanito, Las Vegas	Bicolor - Accent Barrett Browning, Bridal Crown, Flower Record, Fortune, Las Vegas, Magnet, Jack Snipe, Salome, Jules Verne
White - Cassata, Mt. Hood, Ice Follies, Printal	White - Cassata, Mt. Hood, Ice Follies, Printal
Double - Bridal Crown Repleat	Double - Bridal Crown Repleat

Reference

De Hertogh, A. A. 1996. *Holland Bulb Forcer’s Guide, 5th ed.* International Flower Bulb Centre, Hillegom, The Netherlands.