

EXPERIMENTS WITH FORCING BULBS AND HYDRANGEAS

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Narcissus For the earliest flowering, bulbs should be stored dry at 50° F. for 6 weeks starting about September 1, then flatted and returned to this temperature for about 6 weeks or until the new growth is several inches in height. Delay in planting after precooling reduces its effectiveness. Exposure of the bulbs to high temperature tends to reduce stem length and flower size.

Tulip Earlier flowering and longer stems are produced if tulip bulbs are stored at 40° F. for 6 weeks starting about September 1 and are then flatted and held at 48 to 50° for 6 additional weeks before forcing.

Iris Heat-curing mature Wedgewood iris bulbs for 10 days at 90° F., as soon as harvested, promotes early flowering and reduces blindness during forcing. Too early harvesting, precooling and forcing increase losses due to weak growth and blindness. Bud-blasting is increased during dark weather and at temperatures above 60°. Bulbs can be maintained in a dormant condition and flowered at will by holding them at a constant temperature of 85°. Prior to forcing they need precooling for from 4 to 6 weeks at 50°, preferably following a period of 2 weeks or more at room temperature prior to precooling.

Lily Size and weight graded Croft lily bulbs showed similar forcing responses. Plants from bulbs of increasing size or weight emerged earlier and bloomed earlier with more flowers. Use of Thimet in the bulb field resulted in earlier emergence, taller plants and aphid control throughout the forcing period. Prevention of bud development by spraying with CIPC resulted in a 14 percent increase in bulb weight in tests at Tifton, Georgia, with Georgia lily and a 20 percent increase with Croft at Smith River, California. Phosfon, a growth retardant, is effective in controlling the height of forced Easter lilies. The material is applied as a soil amendment or preferably as a drench when the plants are several inches in height. Reduction in plant height is proportional to the amount applied.

Hydrangea Hydrangeas are propagated by cuttings taken during the winter and spring from vigorous, healthy shoots. Leaf bud cuttings produce as good plants and are preferable to tip cuttings. They are best rooted unshaded under mist in perlite, sand or light soil in small pots. Vegetative growth is favored by long days, warm temperatures, 60° to 80° F., ample moisture and moderate fertilization. Cool temperatures and short days favor flower-bud initiation. About 1000 hours at temperatures of 40° or lower are needed for breaking dormancy prior to forcing. This need not be continuous except for the earliest flowering. A growth inhibitor is present in the leaves which delays resumption of growth so they need to be removed by dark storage, use of ethylene or chemical defoliant. Recent work shows that gibberellin can substitute for at least one-half of the storage requirement but over-treatment must be avoided. Blue color is produced by aluminum reacting with delphinidin that is formed in the sepals. Nitrogen and phosphorus fertilization limit aluminum uptake and promote pink colors, while potassium favors a blue color. About three months are required for forcing at a 60° night temperature.