

EASTER LILY VERNALIZATION

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During the past five years the bud count on the lily crop has been unsatisfactory. Precooling was questioned as one of the causes for low bud counts. It was decided to compare commercial cooling with cooling at the floriculture greenhouse and with Controlled Temperature Forcing (CTF).

"Methods and Schedules for Forcing Easter Lilies, 1978" by Dr. H.F. Wilkins was used as a guide for CTF. The 1978 UConn Easter Lily Guide was used for other crops. The Fred C. Gloeckner & Co., Inc. donated 200 field grown 'Ace' bulbs for cooling experiments.

On October 21, 100 field-grown 8-9" 'Ace' were placed in a 36° cooler with damp peat as packing. These bulbs were called "UConn precooled" or "UPC." The other 100 bulbs were potted in six inch clay standard pots with a 2 1/2" pot of pea stone in the bottom. Bulbs were set on the stone and covered with a 3-2-1 soil mix (3 parts composted soil, 2 parts peat, and 1 part coarse sand) amended with limestone. These were called "CTF."

The "CTF" pots were put into a 60° house with a soil temperature around 63°. The soil was kept moist at all times. On November 4, 1977, when the pots were moved into a 36° cooler, 37 bulbs had sprouted.

On November 28, 8-9" 'Ace' commercial precooled bulbs purchased from Fred C. Gloeckner & Co., Inc., ("CC") were picked up in Hartford and potted in the

same manner as the "CTF" bulbs. The "UPC" bulbs were taken out of the cooler, potted, and put in the 60° house. All unsprouted "CC" bulbs were covered with a piece of polyethylene. On December 16 the "CTF" pots were removed from the cooler and placed in the 60° house. At this time the count of sprouted bulbs was "CTF," 50; "UPC," 29; and "CC," 32.

All the lilies were grown in a 60° house which was raised to 65° on January 4 since the progress of the crop was slow. It was lowered to 60° on Feb. 8. Ninety percent of the "UPC" and "CC" crops flowered for Easter without further temperature manipulation. Phosfon was applied to the tallest 48 pots in each treatment when the plants were 3" to 6" tall. Phosfon treatment did not lower bud counts.

The "CTF" lilies were late and 95% missed Easter by as much as 3 weeks. The bud counts were as follows:

| <u>Treatment</u> | <u>Bud Count</u> |
|--------------------------------------|------------------|
| "CC" Commercial Precooled | 5.5 |
| "UPC" UConn Precooled | 6.4 |
| "CTF" Controlled Temperature Forcing | 7.9 |

This experiment will be duplicated next year with further modification of temperature to improve timing of flowering.