

## 1961 PROGRAM ON THE USE OF CYCOCEL ON POINSETTIAS\*

2-Chloroethyltrimethylammonium chloride, chlorocholine chloride (CCC) was evaluated as a growth regulant for poinsettias on a nationwide scale in 1961. The conclusion of growers and research workers alike was that it is a useful and valuable tool for poinsettia production. It allows plant height to be controlled under optimum watering and fertilization. Cuttings can be taken early (in July) and the advantages of long day growing conditions obtained. More cuttings are possible from each stock plant. If desired, an increased number of pots per unit of greenhouse bench is possible. Treated plants are dwarfs of their untreated counterparts. Internodes are short and sturdy, leaves are somewhat smaller but have a deep lustrous color on the red cultivars, and for lighted plants, maturity is delayed from 3-7 days. Overdosing and late season applications can almost completely stop growth. Bracts may be severely savoyed. Plants treated with CCC should be watered carefully since their requirements are different.

The effects of CCC have been most pronounced and most satisfactory on rapidly growing plants. If a single treatment is used, there are three logical times to treat: (1) When cuttings are well-rooted in 2-1/4s or 3s; (2) When plants are well-rooted after panning; or (3) When shoots on pinched plants are 1-2" long. Some workers are suggesting late season treatments to "stop" growth after a desired height is reached. This is a dangerous type of treatment that should not be recommended, excepting possibly in Florida.

In 1961, the most widely acceptable rate of application was 1/2 fluid ounce of a 50% aqueous solution of CCC in 3 quarts of water. This concentration was drenched onto 2-1/4s or 3s at the rate of 2 fl. oz./pot. To make use easier, CCC will be distributed as a solution containing one (1) lb. per gallon in 1962. The suggested rate of application is 1 quart in 10 gallons of water applied at 2 fl. oz. per 2-1/4 - 3 inch pot. The diluted solution should be used on larger pots as follows: 3 oz. per 4"; 4 oz. per 5"; 6 oz. per 6"; and 8 oz. per 8". These volumes can be applied in any convenient manner: with a proportioner, a pump or by hand. An adequate and equal amount of space should be provided at potting time for these volumes.

The time at which treatments can be safely and profitably made are nearly as important as rates. In the North, CCC should not be applied to small pots later than September 15; in the South, October 1. Early panning is desirable and single or pinched plants can be effectively treated in pans. Under no circumstance should CCC be used later than October 15 in the North and November 1 in the South. If repeat applications are used, they should be guided by the latest suggested date and the observation that plants are growing out of the first treatment.

There are differences in the response of different poinsettia cultivars to CCC. Most of the research to date has been with two varieties - Barbara Ecke Supreme and Indianapolis Red. A lesser amount of work has been done with Ecke's Pink and Ecke's White but the data are inconclusive. All cultivars tested to date have been dwarfed. It appears that the following response groupings are possible:

Very Sensitive (suggested application very effective)

Indianapolis Red  
Improved Indianapolis Red

Sensitive (suggested application effective)

Barbara Ecke Supreme  
Improved Barbara Ecke  
Henrietta Ecke  
Albert Ecke  
Improved Albert Ecke - little less sensitive  
Ecke Number 4  
St. Louis

Least Sensitive (data inconclusive)

Ecke's Pink  
Ecke's White

The above recommendations will not find agreement with all growers or with all research workers. This is to be expected. CCC will find its proper usage only after each grower has decided exactly how he can best use it under his own growing conditions.