

CCC ON POINSETTIAS-QUANTITY APPLIED¹

R. E. Widmer and L. W. Drewlow²

Poinsettia height control through the application of CCC (Cycocel or 2-chloroethyl trimethylammonium chloride) is now a common practice (1). Methods of application (soil drench and foliar spray) and rates of application are not standardized, however, and vary with the grower, area, variety grown, etc. The manufacturer recommends the application of 2 fluid ounces of a 3,000 parts per million (p.p.m.) solution per 2½- and 3-inch pots. They also state that two applications may be necessary to apply the recommended volume to 2-inch pots.

Two fluid ounces equal 59.2 milliliters (ml.). Frequent checks in the University greenhouse indicated that 20 ml. of solution usually filled a 2½-inch pot to the rim. Therefore, a third application may be necessary to satisfy the 2 fluid ounces recommendation. If you make more than one application of the solution to the soil, a large quantity of the liquid will drain out of the soil and pot at the base. The question then is how much of the Cycocel from the second and third applications is retained in the soil and subsequently transported into the plant. A study was conducted to compare the effect of a foliar spray and soil drenches of 20, 40, and 60 ml. (one, two, and three, waterings of 20 ml.) of solution of 3,000 ppm cycocel on poinsettias.

Materials and Methods

Cuttings of the varieties Barbara Ecke Supreme, Elisabeth Ecke, and Paul Mikkelsen were taken on July 13, 1966 and rooted in soil in pots under intermittent mist. The Cycocel treatments were applied on August 23 and repeated on September 15.

The foliar sprays were applied to runoff and water was kept off the leaves for 24 hours thereafter. Soil drenches were applied to moderately moist soil. The plants were shifted to 6-inch pans (three or four per pan) on November 14. A minimum night temperature of 60° F. was maintained, weather permitting.

Discussions and Results

Effectiveness of the Cycocel soil drench in limiting plant stretch increased with the number of applications (table 1). Differences with the number of applications were greatest with the variety Barbara Ecke Supreme. By contrast, the diameter of the bract cluster of this variety was least affected by increasing the

¹ Paper No. 6278 Scientific Journal Series, Agricultural Experiment Station, University of Minnesota

² L. W. Drewlow is a graduate assistant in floriculture.

Table 1. Effect of Cycocel treatments applied to three varieties of poinsettias propagated July 13, 1966. Plants were treated on August 23 and September 15 and shifted to 6-inch pans on November 14.

Treatment	VARIETY											
	Barbara Ecke Supreme ¹				Elisabeth Ecke ¹				Paul Mikkelsen ¹			
	Plant height (inch) ²	Plant height (inch) ²	Increase in plant height (inch)	Diam. bract cluster (inch)	Plant height (inch) ²	Plant height (inch) ²	Increase in plant height (inch)	Diam. bract cluster (inch)	Plant height (inch) ²	Plant height (inch) ²	Increase in plant height (inch)	Diam. bract cluster (inch)
Cycocel	Sept. 13	Dec. 19	9/13 to 12/19		Sept. 13	Dec. 19	9/13 to 12/19		Sept. 13	Dec. 19	9/13 to 12/19	
Soil drench												
20 ml ³	8.1	16.8	8.7	10.3	6.0	11.5	5.5	9.2	11.4	23.7	12.3	9.0
40 ml ³	8.0	15.1	7.1	10.2	5.4	9.8	4.4	9.4	10.8	21.9	11.1	8.4
60 ml ³	7.2	12.1	4.9	10.3	5.8	9.6	3.8	8.0	10.9	21.3	10.4	8.1
Foliar spray	8.2	12.5	4.3	9.4	6.6	10.5	3.9	8.2	12.1	19.6	7.5	7.8
Control	8.6	16.9	8.3	11.0	7.6	16.2	8.6	10.7	12.2	22.2	10.0	9.4

¹ There were 16 plants per treatment for Barbara Ecke Supreme and Paul Mikkelsen and 12 plants for Elisabeth Ecke.

² Measured from pot rim.

³ 20, 40, and 60 ml. refer to one, two, and three waterings of 20 ml.