



# HORTICULTURE DIGEST

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## GROWTH RETARDANTS ON 'ECKESPOINT C-1' POINSETTIA

An experiment was designed and tested to determine the best time to spray or drench with Cycocel or A-rest for a September planting of poinsettias.

Terminal cuttings of 'Eckespoint C-1' were planted, three per 6-inch pot, in a 1:1 mixture of volcanite and wood shavings with the addition of 7 oz lime, 7 oz superphosphate, and 6 oz Osmocote 14-14-14 per cubic foot. The cuttings were panned September 23, 1972 and held under an intermittent spray for a week. They were shifted to automatic irrigation (once a day until October 17, twice daily thereafter) with fertilizer injection (1:100, with 15.5 lb each of  $\text{Ca}(\text{NO}_3)_2$  and  $\text{KNO}_3/50$  gal stock) at each watering.

Cycocel was applied as a soil drench of 600 mg/pot 10 days after planting and as a 2000 ppm spray at 14; 28; 14 and 28; and 14, 28, and 42 days after planting. A-rest was applied as a soil drench at the rate of  $\frac{1}{4}$  mg per pot in early (10 days after planting) and late (28 days after planting) treatments and as a 25 ppm spray at each date. The results are shown in Table 1.

The A-rest spray at 25 ppm caused some leaf burn and marginal puckering of young leaves. Cycocel at 2000 ppm caused slight marginal

chlorosis with no burn, and the injury was not apparent when the data were collected in December.

The data show that both retardants reduced plant height, although there are many reports that 'Eckespoint C-1' is not as sensitive to retardants as other cultivars. All treatments were too tall for a 6-inch pot.

The maturity-hastening effect of the retardants is evident in the number of cyathia per inflorescence showing pollen on December 19. However, 2 weeks earlier there was little color development and there were few cyathia with pollen. The cool temperatures of December 1972 were instrumental in rapid color development. Repeated sprays of Cycocel tended to delay maturation.

All the inflorescence diameters were satisfactory. This was expected, however, for single stem plants. Repeated applications of Cycocel spray had a slight tendency to reduce bract size.

It would appear that repeated spray applications of Cycocel offer some means of controlling poinsettia height if the labor of drenching each pot is too great. The 2000 ppm rate is not enough for control in a single application but, coupled with a grower's judgment as to the growth rate of his crop, may be used two or more times in a season to achieve shorter plants.

The damage encountered with A-rest sprays at 25 ppm suggests that either this concentration is too high or that the carrier of the experimental sample was damaging to poinsettia foliage. The 0.25 mg drenches did not provide good height control for this cultivar. Reports from California and elsewhere suggest that 0.50 mg/pot will give better results. These same studies indicate that two drenches of A-rest applied in mid-September and mid-October gave shorter plants than single applications at other times.

It should be noted that mainland studies using a similar format showed different responses with other cultivars and even year-to-year differences with 'Eckespoint C-1' red.

Richard A. Criley  
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Table 1. The effect of growth-regulator treatments on 'Eckespoint C-1' poinsettia

Treatment	Concentration	Height (in)	Inflorescence diameter (in)	Maturity rating (number of cyathia/inflorescence showing pollen)
Control		29.5	12.4 X 10.7	3.4
Cycocel drench 10 day	600 mg/pot	23.7	13.1 X 11.2	6.3
Cycocel spray 14 day	2000 ppm	26.7	14.1 X 12.6	6.0
Cycocel spray 28 day	2000 ppm	26.8	12.4 X 11.2	5.2
Cycocel spray 14, 28 days	2000 ppm	23.7	12.9 X 11.7	4.3
Cycocel spray 14, 28 42 days	2000 ppm	22.3	13.1 X 11.6	6.7
A-rest drench 10 day	0.25 mg/pot	26.8	13.4 X 12.3	6.5
A-rest drench 28 day	0.25 mg/pot	28.5	13.3 X 11.5	4.9
A-rest spray 10 day	25 ppm	26.1	13.6 X 12.1	5.7
A-rest spray 28 day	25 ppm	24.3	13.5 X 11.8	5.6