

# Response of Eckespoint C-1 POINSETTIA to growth retardants

S. T. BESEMER



Foliage injury 13 days after UNI-F529 spray at 1.50 per cent concentration (plant on right) as compared with the control plant to left.

**P**REVIOUS EXPERIMENTS have shown that the response of commercial potted poinsettias to growth retardants varies widely according to plant variety, type of chemical used, rate and time of application. The objective of this 1968 trial, conducted at Paul Ecke, Inc., San Diego County, was to determine the response of the newly released variety, Eckespoint C-1.

The three growth retardants compared were 2-Chloroethyltrimethylammonium chloride (Cycocel), succinic acid 2,2-dimethylhydrazide (B-Nine or Alar), and a new material, N-pyrrolidinosuccinamic acid (UNI-F529).

Rooted cuttings from 2¼-inch plastic pots were panned at three per 5-inch clay pot on October 2, 1968. One-third of the 420 pots were treated with growth retardants on October 4; the second group was treated on October 16, and the final group on October 25. All pots received only one application of chemical. There were 10 pots per treatment.

Final data were recorded on December 13 when all the plants were marketable.

Each stem was measured for its height in inches from the top of the pot to the flowers. Each bract set was measured in two directions to get an average diameter. The number of flowers with pollen was noted as a measure of maturity. Foliage injury was rated several days after retardant applications. A final market quality rating was also made. The table gives average data per treatment of 10 pots (30 stems).

## Results

All chemical treatments reduced plant height in various degrees. The UNI-F529 sprays at 0.5 and 1 per cent resulted in the shortest plants; but these treatments also reduced bract size, delayed maturity, and burned or distorted foliage. Alar sprays were less effective than equal rates of UNI-F529 or the Cycocel treatments. Alar also caused some slight delays in maturity and serious injury at the 1 per cent rate. Injury itself may have contributed to the plants being shorter.

Cycocel treatments generally were the most effective in producing short plants

without seriously injuring foliage or delaying maturity. Bract diameters were slightly reduced by Cycocel, but to a lesser degree than by Alar at 1 per cent or by UNI-F529 at 0.5 and 1 per cent.

In all treatments, stem height was reduced more by applications 14 days after panning than by applications at 2 or 23 days. Also, bract diameters were the least reduced and maturity the least affected when the chemicals were applied at 14 days after panning. From the standpoint of market quality, Cycocel produced more uniform, and better-looking plants than any of the other treatments, including the control.

This experiment indicates that Eckespoint C-1 poinsettia is not favorably responsive to the growth retardants commonly used on other poinsettia varieties. Excessive height was not a problem in this trial, even when no retardants were applied.

*Seward T. Besemer is Farm Advisor, San Diego County.*

AVERAGE STEM HEIGHT, BRACT DIAMETER, FLOWERS WITH POLLEN, FINAL QUALITY RATING, AND INJURY RATING FOR POT POINSETTIA ECKESPOINT C-1, TREATED WITH GROWTH REGULATORS, 1968 TRIAL

Treatments (10 pots each, 3 stems/pot)		Days after panning, chemical applied																															
		2			14			23			2			14			23			2			14			23							
		Stem height, inches			Av. bract diameter, inches			No. flowers w/pollen			Quality rating*						Injury rating†																
Cycocel drench	1:80	11.4	10.9	11.9	11.0	12.0	10.8	3.1	7.3	2.2	1.9	1.1	2.3	0.0	0.2	0.0	Cycocel drench	1:40	11.4	10.3	11.3	11.0	11.7	10.9	3.3	8.0	3.8	1.8	1.3	1.7	0.0	0.0	0.0
Cycocel spray	1:80	11.8	10.8	11.0	11.1	11.7	10.4	4.5	6.6	2.9	1.7	1.5	2.0	0.0	0.4	0.0	Cycocel spray	1:40	11.2	10.5	10.5	11.1	11.4	10.4	4.5	7.5	3.4	1.9	1.8	2.0	0.2	1.3	0.0
Alar spray	.25%	12.6	11.8	11.8	11.4	12.4	10.6	3.0	9.0	2.9	2.1	1.2	2.3	0.0	0.0	0.0	Alar spray	.50%	11.9	11.1	12.0	11.2	11.6	10.4	3.8	6.7	4.8	2.2	1.6	2.5	0.6	1.8	1.5
Alar spray	1.00%	11.7	10.8	10.9	10.2	11.0	9.2	1.1	5.8	3.2	2.7	2.4	2.9	2.4	4.4	4.7	Alar spray																
UNI-F529 spray	.25%	12.1	10.6	10.4	11.4	12.0	10.0	3.2	8.4	2.6	2.2	1.6	3.2	0.3	0.9	0.3	UNI-F529 spray	.50%	10.7	9.5	9.8	10.8	11.2	10.3	2.8	6.7	2.5	2.3	2.0	2.6	1.8	2.1	0.5
UNI-F529 spray	1.00%	10.2	8.5	8.6	10.6	10.5	9.8	1.2	5.3	3.3	2.3	2.5	3.5	4.2	3.6	4.1	UNI-F529 spray																
Control		12.8	12.1	12.5	11.6	12.4	11.3	3.1	8.2	2.7	2.1	1.4	2.1	0.0	0.2	0.0	Control																
Average, all treatments		11.6	10.6	11.0	11.0	11.6	10.3	3.0	7.5	3.2	2.1	1.6	2.4	1.2	1.8	1.2	Average, all treatments																

\* Quality rating (finished crop): 1 = excellent condition, plants uniform, leaves normal; 5 = poor quality, not uniform, upper leaf and bract distortion.

† Injury rating: 1 = no leaf injury; 5 = severe leaf injury and distortion.