

RETARDANTS TO DWARF *ABUTILON*

The family, Malvaceae, has long been known to be sensitive to the growth retardant, chlormequat (Cycocel) (1,2). Little retardation was shown with daminozide sprays at 0.25, 0.5 or 1% or Phosfon drenches at 0.025, 0.05, or 0.1% (2).

Abutilon x hybridum cuttings donated by Big Island Plant & Foliage Nursery were rooted and

planted in 6" pots at the Waiakea Experimental Station near Hilo. A single pinch was given and retardants applied when the new growth was about 1½ inches long.

The retardant treatments and growth after 11 weeks are shown in Table I. The best results were obtained with chlormequat applied as a 500 mg drench or as a 4000 ppm spray. At the highest rate of chlormequat, there was little variegation in the normally variegated leaves (Fig. 1).

Ancymidol and chlormequat both retarded elongation of *Abutilon megapotamicum variegatum* in trials run at UHM. The most effective rates were the drenches of chlormequat at 750 mg/6-inch pot and ancymidol at 0.5 mg/6-inch pot.

The compact growth habits attained with the retardants both render the potted plant more attractive and lengthen their period of marketability.

Literature Cited

1. Bose, T. K., B. K. Hore, and D. Mukherjee. 1968. Dwarfing of some malvaceous ornamental plants as a nursery practice. HortScience 3:179-180.
2. Hildrum, H. 1970. Wirkung von hemmstoffen auf pflanzen aus der familie der Malvaceae. Gartenwelt 70(2):23-27.

R. A. Criley and T. Higaki
Associate Horticulturists
UHM & UHH

Table I. Growth responses of *Abutilon x hybridum* to applications of growth retarding compounds.

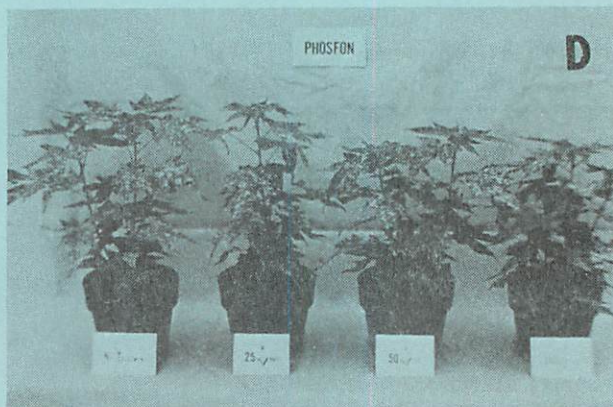
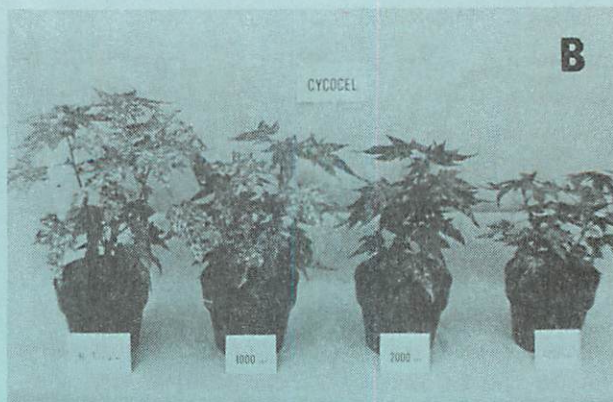
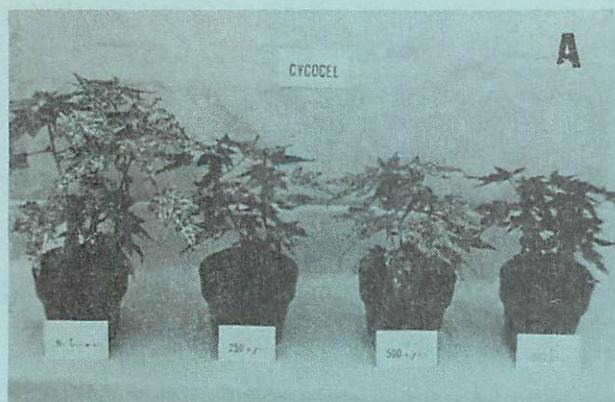
| Treatment | | Height (cm) | Diameter (cm) |
|-----------------------------------|--------------|-------------|---------------|
| Control | | 24.2 bc | 19.4 bc |
| Ancymidol ^{a)} drench | ½ mg/pot | 28.8 a | 20.6 ab |
| Ancymidol spray | 50 ppm | 25.2 b | 26.6 a |
| Chlorphonium ^{b)} drench | 25 mg/pot | 23.4 bc | 20.6 ab |
| “ | 50 mg/pot | 21.2 cd | 18.6 bcd |
| “ | 100 mg/pot | 18.2 def | 17.4 cde |
| Chlormequat ^{c)} spray | 1000 ppm | 19.2 de | 17.8 cd |
| “ | 2000 ppm | 16.6 efg | 15.0 ef |
| “ | 4000 ppm | 13.8 gh | 14.4 f |
| Chlormequat drench | 250 mg/pot | 15.6 fg | 17.4 cde |
| “ | 500 mg/pot | 13.6 gh | 16.4 def |
| “ | 1000 mg /pot | 12.2 h | 13.8 f |

a) α -cyclopropyl - α - (4-methoxyphenyl)-5-pyrimidinethanol as Arest[®].

b) Tributyl (2, 4-dichlorobenzyl) phosphonium chloride as Phosfon-D[®].

c) 2-chloroethyltrimethylammonium chloride as Cycocel[®].

Figures in the same column followed by the same letter are not significantly different.



- FIGURE 1-A** Cycocel (chlormequat) drench.
L to R: Control, 250 mg/pot, 500 mg/pot, 1000 mg/pot.
- B** Cycocel (chlormequat) spray.
L to R: Control, 1000 ppm, 2000 ppm, 4000 ppm.
- C** Arest (ancymidol). L to R: Control, 50 ppm spray, 0.5 mg/pot drench.
- D** Phosfon (chlorphonium) drench.
L to R: Control, 25 mg/pot, 50 mg/pot, 100 mg/pot.

Food For Thought

It's not the size of the dog in the fight, but the size of the fight in the dog.

The real test in golf and in life is not in keeping out of the rough, but in getting out after we are in.

Fred D Rauch

Fred D. Rauch
Assistant Specialist in Horticulture

NOTE: The use of trade names is for the convenience of readers only and does not constitute an endorsement of these products by the University of Hawaii, The College of Tropical Agriculture, the Hawaii Cooperative Extension Service, and their employees.
