

## Poinsettia height control with Bonzi

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**P**aclobutrazol (Bonzi) is a relatively recent addition to the arsenal of growth retardant compounds used by growers to control final height in their poinsettia crop. Paclobutrazol (Bonzi) belongs to a class of compounds broadly described as triazoles and, as such, is distinctly different from previous growth retardants. The most important practical distinction is Bonzi's effectiveness in reducing height at much lower concentrations. This greatly reduced the latitude for ERROR.

It is unrealistic to expect any growth retardant compound to substitute for sound cultural and management practices. Prompt and adequate spacing, as well as a reasonable pinching schedule, are important management decisions that will affect final plant height and efficacy of your Bonzi application.

In spray applications (the only labeled method outside Florida), Bonzi must uniformly reach the plant's lower stem surfaces. Research has shown that absorption through the stem is of primary importance and that, once absorbed, translocation is chiefly upward, where it inhibits elongation of the shoot tip (Barrett and Bartuska, 1982). The application must be uniform because the potency of the material can result in non-uniform height control. Application should be made when breaks are 1 1/2-2 inches. This type of application is difficult to make when plants are too closely spaced. This also means that just a dash over the top for insurance is a waste of time and money. Growers whose schedules call for late pinching (short crop) probably would find Bonzi overly effective for their program.

The effectiveness of Bonzi is influenced by watering, fertilizer program and cultivar. Plant height and bract diameter of V-10 white and dark red Hegg treated with two rates of Bonzi are shown in Figures 1 and 2, respectively. These results are from a larger experiment conducted at Rutgers University in 1986. Our experience suggests this is not a compound of choice for varieties where height control is not a serious problem, or when applications are needed "later" in the season. Bonzi was applied as a spray at either 50 or 100 ppm; i.e., on 10/1/86 and 10/14/86. Note that bract size was significantly reduced on both cultivars as well as height. The V10-white variety was unacceptable in final height as well as bract diameter. Several other compounds and combina-

## Effect of Bonzi Spray Applications Varieties V10 White and Dark Red Hegg

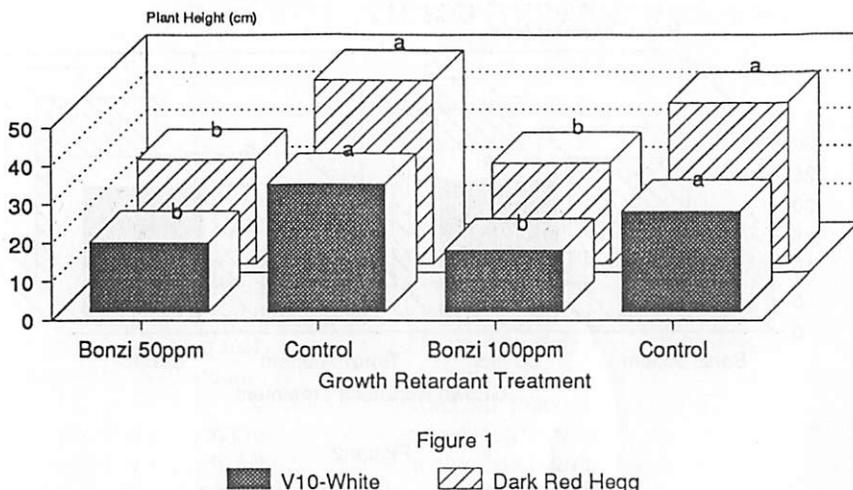


Figure 1

■ V10-White      ▨ Dark Red Hegg

Means are measurements of 10 plants.  
Within Varieties different letters  
indicate statistical significance.

tions were employed in this experiment, but Bonzi had by far the most significant impact.

Light and temperature are also important factors that vary from grower to grower. Greenhouses with inadequate temperature control, where day temperatures may frequently be excessive, are apt to experience height control problems. Delaying shade removal or dirty glass or plastic can reduce light and increase final height. The point is that a close look at your production environment is warranted before you try to "muscle" your crop down to size with a chemical treatment.

Application rates and timing are important with any plant growth regulating material, but with Bonzi, real attention to detail is required. Be sure your calculations, volume measurement and sprayer calibration are accurate, and that you are covering the bench area per volume suggested on the label.

The Bonzi label contains special information for producers in the North regarding rates and multiple applications. These should be read very carefully since, in our experience, multiple applications of recommended rates can result in excessive height reduction (Fig. 1). Also, late application, especially after other retardants have been applied, is not an

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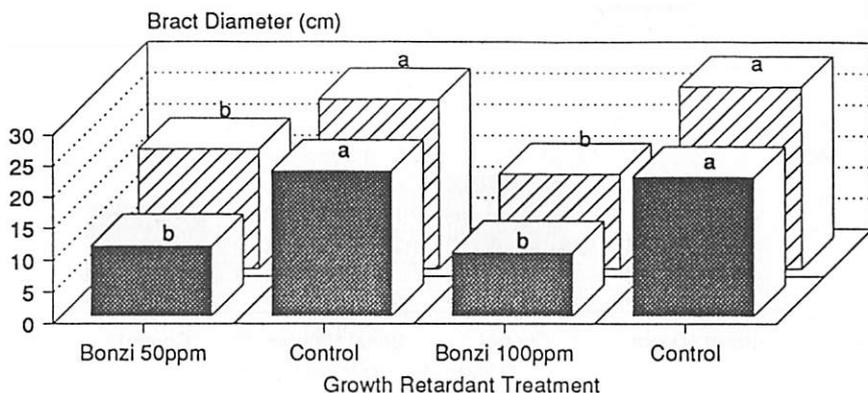


Figure 2

V10-White    
  Dark Red Hegg

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advisable practice. Our experience to date suggests that growers would do well to use Bonzi experimentally on a small scale within the range of recommended rates to establish optimal rates for their particular circumstances.

In summary, Bonzi is a new class of exceptionally potent growth retardants which can effectively control the height of poinsettias, but should be used judiciously by producers in the Northeast.

### References:

Barrett, James E. and Carolyn A. Bartuska. *HortScience* 17(5):737-738. 1982.