



by Joyce Latimer
jlatime@vt.edu

Tank Mixing for Branching and Height Control

Now that many of your bedding and garden plants are in their finished containers, you may be wishing you could improve the branching but what you really need is growth control. Well, tank mixing might be your answer.

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Many tank mixes are designed to provide a synergistic effect. In other words, you can use lower rates of both products to get the same or greater efficacy. Although we have found no synergism with tank mixes of Configure (6-BA, Fine Americas, Inc.) and growth retardants, we saw good response when Configure was tank mixed with the growth retardant Piccolo (paclobutrazol, Fine Americas, Inc.).

What we did

So, to give you some examples, we compared an untreated control with foliar applications of 600 ppm Configure, 120 ppm Piccolo, or a tank mix of 600 ppm Configure plus 120 ppm Piccolo using three crops, *Echinacea* 'Doubledecker,' *Heuchera* 'Silver Lode,' and *Leucanthemum* 'Becky.' The sprays were applied about 10 days after potting. Plants were evaluated for height and number of branches over the production period. Only the *Echinacea* flowered during the trial.



Photo by condesign via pixabay.

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CONTRIBUTORS

Dr. Nora Catlin
Floriculture Specialist
Cornell Cooperative Extension -
Suffolk County
nora.catlin@cornell.edu

Dr. Chris Currey
Assistant Professor of Floriculture
Iowa State University
ccurrey@iastate.edu

Dr. Kristin Getter
Floriculture Outreach Specialist
Michigan State University
getterk@msu.edu

Dan Gilrein
Entomology Specialist
Cornell Cooperative Extension -
Suffolk County
dog1@cornell.edu

Dr. Brian Krug
Floriculture Ext. Specialist
Univ. New Hampshire
brian.krug@unh.edu

Dr. Joyce Latimer
Floriculture Extension & Research
Virginia Tech
jlatime@vt.edu

Dr. Roberto Lopez
Floriculture Extension & Research
Purdue University
rglopez@purdue.edu

Dr. Neil Mattson
Greenhouse Research & Extension
Cornell University
neil.mattson@cornell.edu

Dr. Paul Thomas
Floriculture Extension & Research
University of Georgia
pathomas@uga.edu

Dr. Brian Whipker
Floriculture Extension & Research
NC State University
bwhipker@ncsu.edu

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What we found

Echinacea. Plant height of *Echinacea* ‘Doubledecker’ was reduced by all PGR applications at 2 weeks after treatment (WAT) but only those PGR applications including 120 ppm Piccolo resulted in shorter plants at 4 WAT (Figure 1). Thereafter, the persistent 40% reduction in the vegetative plant height of Piccolo-treated plants were not statistically significant, which suggests variability in our plant growth. Plant width was only mildly affected, significantly reduced by all treatments at 2 WAT but only by the Piccolo only treatment at 4 WAT.

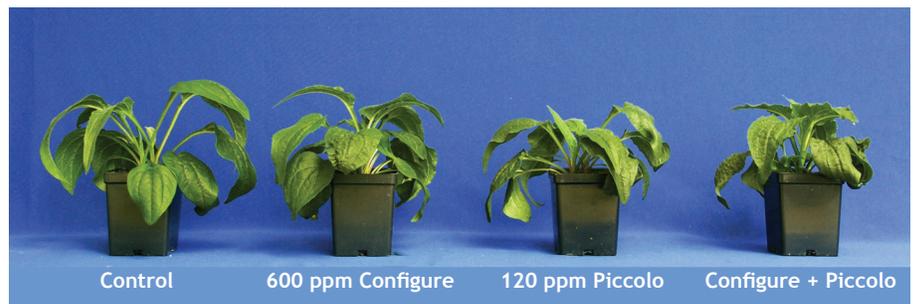


Figure 1. *Echinacea* ‘Doubledecker’ untreated or treated with 600 ppm Configure, 120 ppm Piccolo or a tank mix of Configure and Piccolo at those same rates (left to right). Configure treatments increased the number of basal branches (Control 1.9 vs Configure 4.4 vs. Pic 1.8 vs Conf+Pic 4.6). Photo at four weeks after application.

Only the PGR applications including Configure increased the number of basal branches of *Echinacea*. This increase of over 100% in the number of branches persisted through the 12 week study but did not translate into a significant increase in the number of flowers per plant. Numbers of flowers per pot at 12 WAT: Control 6.7 vs. Configure 9.9 vs. Piccolo 5.3 vs. Configure+Piccolo 6.4. Flowering was delayed (less than one week) with this rate of Piccolo but flower height was not reduced by either Piccolo applications.

Heuchera. Neither plant height nor width of *Heuchera* ‘Silver Lode’ was affected by Configure or Piccolo relative to the control plants. Because of the compactness of the crown, it is very difficult to get an accurate count of branches on *Heuchera*. So, we conducted a destructive harvest to get the 4 and 6 WAT basal branch counts. We found that the number of basal branches was increased by either Configure or the Configure+Piccolo application (Figure 2).

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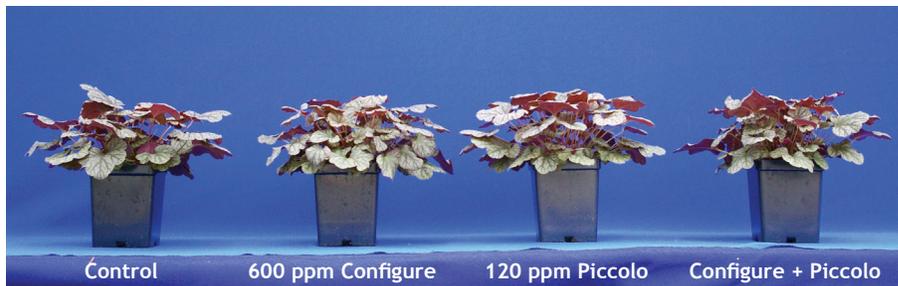


Figure 2. *Heuchera* 'Silver Lode' untreated or treated with 600 ppm Configure, 120 ppm Piccolo or a tank mix of Configure and Piccolo at those same rates (left to right). Configure treatments increased the number of basal branches (Control 13 vs Configure 23 vs. Piccolo 12 vs Configure+Piccolo 28). Photo at four weeks after application.

Leucanthemum. Plant height of *Leucanthemum* 'Becky' was reduced by all treatments at 2 WAT but the differences were not significant at or beyond 4 WAT (Figure 3). Plant width was reduced moderately, but significantly, by Configure + Piccolo treatment at 4 WAT, and by both treatments containing Piccolo at 6 WAT. Both treatments containing Configure increased the number of basal breaks of *Leucanthemum* at 2 WAT. These results persisted for the Configure treatment at 4 WAT.



Figure 3. *Leucanthemum* 'Becky' untreated or treated with 600 ppm Configure, 120 ppm Piccolo or a tank mix of Configure and Piccolo at those same rates (left to right). Piccolo reduced plant height moderately while Configure increased branching (Control 11 vs Configure 14 vs. Piccolo 11 vs Configure+Piccolo 12). Photo at four weeks after application.

Recommendations

Tank mixes of Configure and Piccolo work well to improve plant branching as well as to maintain control of plant growth on responsive crops. Our results do not support any suggestion of synergism in the effects of these combined products. We found similar results with tank mixes of Configure plus Concise (uniconazole) or with Configure plus Dazide (daminozide). Therefore, select your Configure rate and your growth retardant rate based on the needs of the crop and your own experience.