

# Controlling Cleome Height

Researchers at the University of Florida conducted a series of studies to analyze the use of plant growth regulators on two cleome varieties.

By Jim Barrett and Carolyn Bartuska

**C**leome is fast growing and can have a very short crop time in production. It also can produce large, colorful garden displays rapidly. In the University of Florida's 2006 variety trials, the vegetatively propagated 'Spirit Appleblossom' and 'Senorita Rosalita' were recognized as two

of the best new varieties in the trials. While this fast development can be an asset, cleome grow so fast that height control can be a problem if they have to be held for some time either in production or at retail.

This winter and spring, we conducted a series of studies to look at growth regulator usage on these two

cleome varieties in 1-gal. containers. Some liners were pinched one week after planting and others were left unpinched. In the warmer spring period, crop time for unpinched plants was only four weeks and five weeks for pinched plants.

drench applications of paclobutrazol on 'Senorita Rosalita'. The paclobutrazol product used for this work was Bonzi, but there are several others on the market that can be used as well. Spray applications up to the relatively high rate of 100 ppm had only a slight effect on plant height. Drench treatments at 5-20 ppm, however, provided better control.

### Comparing Applications

We first compared spray and



These pictures of cleome 'Spirit Appleblossom' were taken four weeks after planting, and plants were not pinched. Plant on left is the control and one on right was given a 5-ppm paclobutrazol drench at two weeks.



These cleome 'Senorita Rosalita' were planted in January and grown cooler. Growth regulator applications were at four weeks, and picture is eight weeks after planting. From left to right, plants are control, paclobutrazol spray at 100 ppm and paclobutrazol drench at 10 ppm.

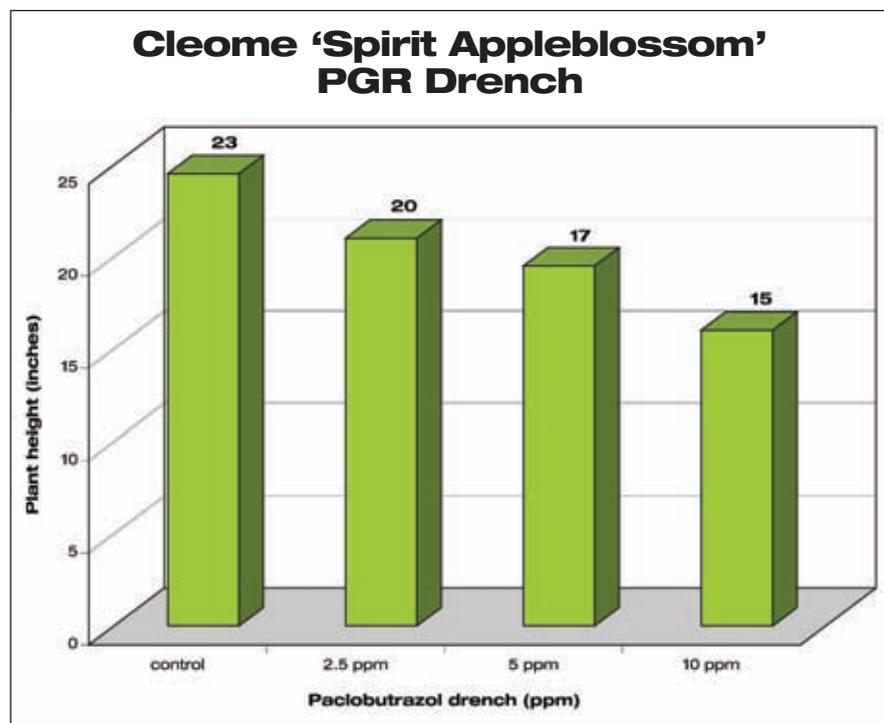


Figure 1. Cleome 'Spirit Appleblossom' were grown unpinched in 1-gal. containers and heights were measured at four weeks. A paclobutrazol drench (volume: 6 fl.oz. per pot) was applied at two weeks.

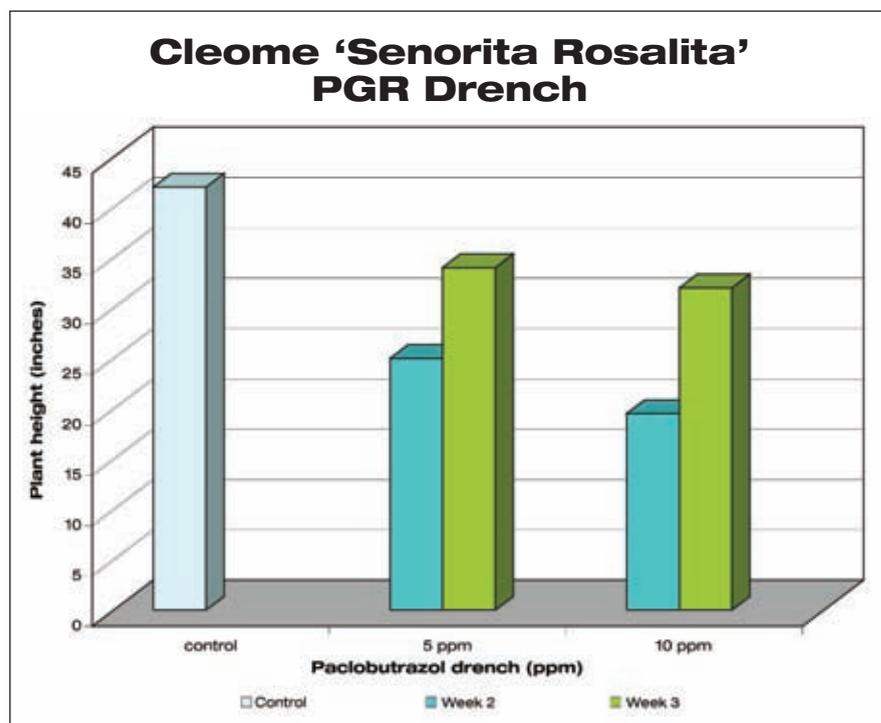


Figure 2. Cleome 'Senorita Rosalita' were grown in 1-gal. containers and pinched at one week. Paclobutrazol drench was applied at either two or three weeks after planting. Heights were measured five weeks after planting.



*Cleome is fast growing and can rapidly produce large, colorful garden displays.*

It is not unusual in vigorous crops to find that growth regulator drenches give better performance than spray treatments. We did not evaluate higher paclobutrazol rates. Measures that may provide better activity with sprays of PGRs such as paclobutrazol, which work better as a drench, include using higher rates, heavier spray volumes and/or multiple applications.

In subsequent studies, we compared making the drench application at 2-4 weeks after planting. We found that the paclobutrazol drench provided better control and at a lower rate if applied two weeks after planting (see Figure 1, opposite). A benefit to the earlier applications was that less chemical was needed and there was little effect on flowering time. We also found that the single early application provided adequate control and a second application was not needed.

#### Increasing Rates

For both varieties, we found a strong response to increasing paclobutrazol drench rates. 'Spirit Appleblossom' is a little more sensitive compared to 'Senorita Rosalita' and higher rates caused more delay in flowering in 'Spirit Appleblossom'. The optimum paclobutrazol drench rate at two weeks after planting was 2½-5 ppm for 'Spirit Appleblossom' and 5-10 ppm for 'Senorita Rosalita'. These trials were all done in Florida, and generally, optimum PGR rates are lower in other parts of the country with lower production temperatures.

More recently, we have looked at sprays of a tank mix of B-Nine (daminozide) and Cycocel (chlormequat). This spray at 2,500-ppm B-Nine and 1,500-ppm Cycocel applied one week after pinching has greater effect than a paclobutrazol spray. However, the amount of control with the tank mix spray does not last as long as the paclobutrazol drench. If more control is needed, a second spray or a paclobutrazol drench could be applied at 2-3 weeks

after planting depending on how much control an individual grower desires.

Cleome is like other fast-growing crops in that making the PGR application early is important to control growth before the plants are too tall and too much chemical is needed. While fast growing,

cleome is sensitive and responsive enough to the PGRs that size control is not difficult. **GPN**

*Jim Barrett is professor of floriculture and Carolyn Bartuska is a biological scientist at the University of Florida, Gainesville, Fla. Barrett can be reached at [jbarrett@mail.ifas.ufl.edu](mailto:jbarrett@mail.ifas.ufl.edu).*

**LearnMore** For more information related to this article, go to [www.gpnmag.com/lm.cfm/gp070705](http://www.gpnmag.com/lm.cfm/gp070705)

#### Reader Interest Review

Please write in the appropriate number on the Reader Service Card to indicate your level of interest in this article.

High 1512 Medium 1513 Low 1514

# A double dose of *Pestium obliterated.*



Quali-Pro® continues to add more excellent choices to the industry's most comprehensive product portfolio to give you full spectrum pest control. New Bifenthrin Nursery 7.9F delivers the insect and mite control you demand with the reliable, long-lasting residual you need. And you get just what you expect from Chlorpyrifos 4 Pro, too — proven control of hundreds of insect pests in a wide variety of outdoor and nursery grown ornamentals.

Choose quality, performance and value; go with Quali-Pro and get it all — for less.

For more information about Quali-Pro products, call 800-979-8994 or visit [www.quali-pro.com](http://www.quali-pro.com).

# QUALI-PRO

PROFESSIONAL TURF & ORNAMENTAL PRODUCTS

©2007 FarmSaver.com, LLC. Quali-Pro is a registered trademark of FarmSaver.com. Always read and follow label directions. Professional products, performance and people, backed by the strength of Makhteshim-Agan Industries, the world's leading manufacturer and distributor of post-patent agrochemicals.

Experience the ProPoints Difference – More Points, Faster Rewards. Register today at [www.propointsonline.com](http://www.propointsonline.com).