

# Better Calibrachos

## with Growth Control



Picture 4. Drench applications on 'Mini Famous Rose Pink'. The plant on the left is the control. The plant on the right received a Bonzi drench at 8 ppm seven weeks after planting.

PGR trials on the FloraStar Elite Winners and merit awardees demonstrate the effectiveness of early and late PGR applications.

**By Jim Barrett**

**H**ave you noticed how popular calibrachos have become? It is an interesting crop. They can either look very nice or very straggly. The flowers are small, and unless there are lots of them, the plant does not give much of a show. In terms of sensitivity to media pH, calibrachos are one of our most demanding crops.

This is a young crop from the stand point of breeding and development; it was introduced only 10-12 years ago. While numerous companies are doing calibrachoa breeding, each company's series is somewhat variable, including varieties with different growth habits and sensitivity to photoperiod. Note: All calibrachos are long-day plants. None are day neutral; however, there are big differences in how early in the spring they will flower.

High light and cool temperatures produce much nicer, more compact plants with a large number of flowers, which is one

of the reasons they always look so good in those Pack Trial pictures. Calibrachos, however, can be very aggressive under the warmer temperatures of Southern production or early summer temperatures of the North and Northeast. The need for lower media pH means that fertilization with high ammonia-

cal nitrogen, such as with a 20-10-20 formulation, is often used, which also promotes elongation. In addition, varieties that require longer day lengths for flowering can produce long shoots before they are saleable. We also cause ourselves more aggravation by putting calibrachos in smaller containers.

The past couple of years, we have grown a large number of varieties as part of our photoperiod research and the FloraStar Elite trials (See page 22 for results from the Elite trials). The need to produce more attractive plants led us to doing growth regulator work for our May field days. For this article, I have chosen the strategy



Picture 1. Early control on 'Sweetheart Lavender'. Left: Control; Right: One application of 5,000 ppm B-Nine seven days after planting the rooted cutting. (All photos courtesy of Jim Barrett)



Picture 2. Early control on 'Spring Fling Yellow'. The plant on the left is the control. The plant on the right received a media spray of 20 ppm Sumagic before planting rooted cutting.

of showing more pictures of the plants and letting them speak for themselves, as in "a picture is worth a thousand words."

There are two important concepts for applying growth regulators to calibrachoa. The first is to achieve early control over elongation, and several methods are available for accomplishing this. The second concept is to use a late drench to produce a more attractive finished plant and to prevent plants from getting out of control at the end of production and in the garden center. Both concepts are useful for baskets and for smaller containers.

### EARLY CONTROL

In picture 1, page 70, the plant on the left is a control (no growth regulator) and the one on the right was sprayed with B-Nine at 5,000 ppm seven days after planting the rooted cutting. The cuttings were pinched at planting, and the picture was taken five weeks after planting. The control plant illustrates the open appearance that can develop when laterals are allowed to elongate too much prior to flowering. For varieties with a trailing or semi-trailing habit, in baskets, this results in all the flowers being out over the edge of the container and the basket not having color on top.

Spraying a growth regulator, such as B-Nine, soon after planting is one method for obtaining early control. Another method is to apply a growth regulator spray directly to the media at or just after planting. This is called a media spray and can be done with any of the chemicals that are active through the media, A-Rest, Bonzi, Piccolo and Sumagic. An example is Picture 2, above. The plant on the left is a control pictured five weeks after



Picture 3. Early control on 'Spring Fling Salmon'. The plant on the left is the control. The other two plants received a liner dip of 1 ppm (middle) and 2 ppm (right) Sumagic.

## crop cultivation



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planting, with the cutting pinched at planting. The plant on the right received a media spray; the container was filled with media, the media surface was sprayed with Sumagic at 20 ppm and the liner was planted. Because of REI requirements, it is usually easier to plant and spray after the pots have been placed in the greenhouse. We used a spray volume of 2 quarts per 100 sq.ft., but some growers will use a volume 2-3 times this with lower chemical concentration. This higher volume is often called a sprench.

A third method for achieving early control is shown in Picture 3, page 71. The control plant is on the left. The other two plants received a liner dip, where the liner was dipped (root zone only) in a Sumagic solution



Picture 5. Drench concentration on 4 1/2-inch 'Spring Fling Yellow', the plant on the left is the control. The other plants received a sumagic drench at (left to right) 1/4, 1/2 and 10 ppm two weeks after transplanting from a rooted cutting.



Picture 6. Drench applications on 'Mini Famous Peach'. The plant on the left is the control. The plant on the right received a Sumagic drench at 1 ppm.



Picture 7. Drench applications on 'Spring Fling Salmon'. The plant on the left is the control. The plant on the right received a Piccolo drench at 4 ppm.

and then planted. The concentrations were 1 ppm for the center plant and 2 ppm for the plant on the right. The root ball should be dipped long enough for it to soak up the chemical, which is about 10-30 seconds. This "liner dip" can also be done by drenching the chemical on the tray from the top. Liners can be treated 1-4 days prior to planting, which makes this application method generally easy to accomplish. This technique is also very good for reducing the growth of calibrachos in mixed containers when they are combined with less vigorous crops, as it is unwise to apply a growth regulator to a combination that might contain slow-growing varieties.


#### DRENCH APPLICATIONS

Picture 4, page 70, demonstrates the effects of a late drench on large baskets. The basket on the right, pictured 11 weeks after planting received a Bonzi drench at 8 ppm seven weeks after planting. There are not more flowers on the treated basket; it just looks that way because they are pulled closer together by the reduced shoot length. If the shoots are not elongating too much, the late drench should be applied just before the plants reach salable size. This will slow growth and keep plants at a salable size longer without stopping flowering. The basket on the right is also better for the consumer since it is not actively growing and does not require watering as frequently.

Picture 5, left, shows the effect of drench concentration on 4½-inch pots. The liners were pinched at planting, the treatment was applied at two weeks and the picture is at five weeks. The plants from left to right are control and Sumagic drench at ¼, ½ and 1.0 ppm. For small containers, the drench usually needs to be applied earlier in the crop than with baskets. Another illustration is of drench concentration is also pictured on the left in Picture 6, where the plant on the right received a Sumagic drench at 1 ppm. Picture 7, left, is an example of a Piccolo drench with the plant on the right receiving 4 ppm Piccolo.

These are examples of the benefits of obtaining early control over

the elongation of calibrachos and for using a drench to keep the plants compact later in the crop. These treatments and rates are examples in Florida's relatively warm spring. Growers in the Midwest should start their trials at about one-half of these rates, and in

the Northwest and New England about one-fourth of these rates are good starting points. 

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