



By Erik Runkle

# Increasing Poinsettia Size

Are your potted poinsettias vertically challenged? When applied on young stems before the first hint of color, chemicals can help promote stem extension and take your plants to new heights.

The size and height of potted poinsettias sometimes need to be increased to meet target height specifications, especially for larger container sizes. One option is to deliver a positive DIF, in which the day temperature is warmer than the night. Another option is to apply a chemical that contains gibberellins (GA<sub>3</sub>, GA<sub>4+7</sub>) to promote stem extension. Several years ago, Valent Professional Products developed and labeled Fascination for the floriculture industry to increase plant height on poinsettia. Last year, Fine Americas released a similar product called Fresco. Both chemicals, which are plant hormones, contain a 1:1 ratio of the gibberellin GA<sub>4+7</sub> and the cytokinin benzyl adenine (BA).

so the decision of whether to make a second application should be delayed by at least 10 days after the first application. Slightly higher rates may be needed if plants are stunted from an over-application of a growth retardant, but I discourage use of a rate above 5 ppm on poinsettia. Be careful to avoid an excessive rate or too many applications. GA can overcome a growth retardant overdose, but a growth retardant cannot usually overcome a GA overdose.

Another use of Fascination and Fresco is to increase the size of the colorful poinsettia bracts or to make the bracts smoother in appearance. To achieve this objective, our research indicates that the most effective time to make a foliar spray application (also at 3 ppm) is approximately 3-4 weeks after first color. When applied this late in production, a single spray application had little promotive effect on plant height. We have observed a bronzing effect on bracts when these products were applied more than twice at higher rates.

Growers may notice that poinsettia bracts treated with these products can become more vertically oriented. However, the bracts return to their more normal horizontal appearance within about a week after the spray application. A moderate spray pressure and thorough coverage of young stems is encouraged to achieve a uniform crop response.

One thing that these products can't do is accelerate plant development. The development of plants is primarily a function of the rate of cell division, which is driven by plant temperature. Therefore, if crops are delayed and not developing color early enough, the best strategy is usually to increase the average daily temperature. Products containing gibberellins primarily act to increase cell size (not cell number), so their application will not influence crop timing. **GPN**

## The best time to increase plant height is at first bract color or earlier.

In the past four years, our floriculture group has performed studies with these products to determine the effects of foliar sprays at different rates and different stages of poinsettia production. We've also investigated rates to overcome stunting from an over-application of a plant growth retardant on the crop. We add a surfactant to our foliar sprays because these chemical solutions tend to run off the waxy poinsettia leaves without it, which reduces the response.

Gibberellins act to promote extension growth on immature stems; they do not have an effect on fully mature branches. Therefore, Fascination and Fresco are most effective at promoting stem extension when applied before first color because the young internodes (an internode is the stem section between each leaf attachment) are still expanding. As plants get closer to anthesis, the potential to increase plant height decreases. Because of this, the best time to increase plant height is at first bract color or earlier.

We have found that a single spray application of Fascination or Fresco at 3 ppm (2.1 oz. per 100 gals. of solution) and a volume of 2 quarts per 100 sq.ft. promotes stem extension by 1-2 inches. It can take about 10 days to observe the full response of the application,

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