



Brian E. Whipker¹

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NEW - Plant Growth Regulator Guide for Annuals Published

The latest version of the Plant Growth Regulator Guide for Annuals is now available, a project sponsored by Fine Americas. GrowerTalks subscribers will receive a copy in the mail or use the link in this Alert to obtain a pdf copy.

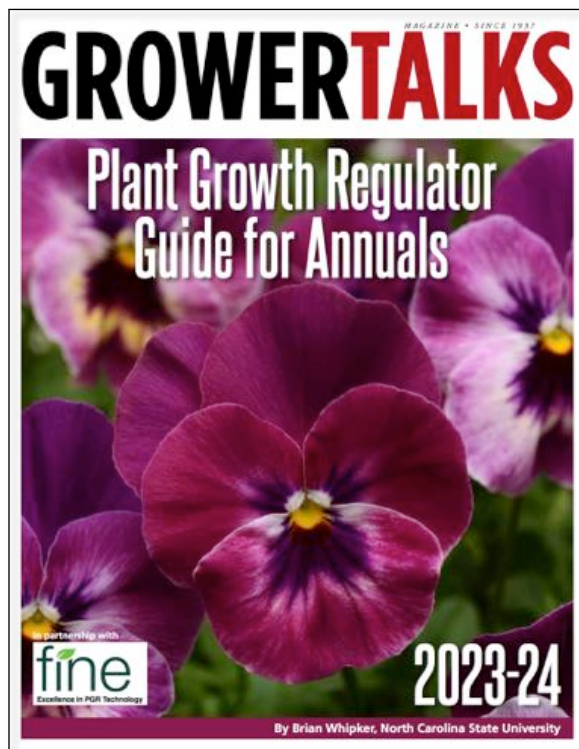
The 72-page Plant Growth Regulator Guide for Annuals publication has been updated for the 2023-2024 season. It contains a number of new articles.

Succulent growth can be slow. The trials conducted by Paul Cockson, Gabby Barajas and Brian Whipker at NC State University investigated the use of Fresco to supercharge growth. The complete article starts on page 6.

In addition, the use of Abide (ancymidol) is highlighted starting on page 3. Fine Americas' new IBA product called Advocate helps to improve rooting of cuttings.

A report on Advocate's effectiveness at promoting roots during propagation is on page 8.

The guide is also the primary resource for best management practices for the use of PGRs. The bulk of the guide is the extensive listing of PGR application recommendations in the 43-page table. Articles also provide an overview of the PGRs available to the U.S. market, additional benefits of PGRs, plus use tips for Piccolo 10XC, Collate, Fresco, and



The New 2023-2024 Annual PGR Guide has been published!

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Florigib 4L, and production information for Coleus with Collate, Poinsettias with Piccolo 10XC drenches, and Configure use on sempervivium.

The goal for the Plant Growth Regulator Guide for Annuals is to provide a single resource of PGR information for greenhouse growers. An electronic version is available from the Fine Americas website. Subscribers to GrowerTalks magazine will also be sent a paper copy with their next issue of the magazine. Appreciation is expressed to Fine Americas for sponsoring the publication.

Link

https://www.fine-americas.com/wp-content/uploads/2023/01/PGR_GUIDE_2023-24_Annuals.pdf

PGR Use Tips

Abide: Plugs & More!

By Brian E. Whipker, North Carolina State University

Ancymidol, the active ingredient in Abide and A-Rest, has a unique niche of providing safe and effective control of excessive stretch during plug production. Some plug species tend not to respond to daminozide (Dazide or B-Nine) or chlormequat chloride (Citadel or AlterGel) applications. This makes ancymidol the perfect alternative of offering a greater degree of control and due to its milder chemistry without the overdose potential associated with the more potent paclobutrazol (Piccolo 10XC, Bonzi, or Pac O) or uniconazole (Concise or Sumagic) sprays.

In the book "Plug and Transplant Production" by Roger Styer and David Koranski, they recommend ancymidol for pansy and vinca plugs at 10 ppm due to effectiveness and the low chance of stunting. The chemical cost for ancymidol is

greater, but for high-value plug flats, safe and reliable control is important.

In addition, Abide can also be used during finish production. Historically, ancymidol was the primary go-to PGR for bulb crops. It's still used by some growers, but over time, uniconazole has replaced it. Ancymidol is favored by some fall pansy producers in the Southeast, especially for the initial crop being grown during periods of excessive summer heat. They prefer the degree of control and safety that ancymidol offers.

In studies we conducted at NC State University, we explored the use of Abide foliar sprays on bedding plants. Spray rates applied twice at a two-week interval starting after roots had reached the side of the pot provided effective control



Figure 1. Growth control of petunia with Abide foliar sprays.



Figure 2. Abide foliar sprays control snapdragon growth.

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Abide highlight article

PGR Use Tips

Super-Charged Succulents

By Paul Cockson, Gabby Barajas & Brian Whipker, North Carolina State University

The wide array of colors, shapes and sizes help make succulents one of the more popular segments of greenhouse production. One of the challenges of succulent production is their slow growth and long production cycle. Growers asked us the question: Could growth be enhanced? This project explored the possibility of enhancing succulent growth with a plant growth regulator (PGR). Based on our experience, we decided that a combination of both GA and BA contained in a product such as Fresco could be the best option. This article highlights the exciting results of our study.

Our approach

We obtained unrooted cuttings of six succulents species from Dümmer Orange. Cuttings were rooted for three weeks and then transplanted into 4.5-in. azalea pots containing a peat-based substrate (80 peat and 20 perlite by volume, Oldcastle C/20 mix). The plants were allowed to establish roots to the side of the pot and then a substrate drench of Fresco was applied at 0, 2.5, 5, 10 or 20 ppm in a volume of 2 oz. supplied per pot. The photos illustrate the results after about three months of growth.

Results

Growth was enhanced with Fresco drench rates between 10 to 20 ppm for most species (Figures 1 to 5). The goal is to provide additional growth without causing excessive plants stretch. Excessive rates may result in too much growth, as seen with the 20-ppm rate on *Senecio crassissimus*. Therefore, growers will need to conduct their own trials to determine optimal rates for the species they're producing under their environmental conditions.

No growth enhancement occurred with the jade plant (*Crassula ovata*, Figure 6). This may indicate that higher rates should be evaluated to determine if growth can be increased.

Conclusions

Our results found that a Fresco substrate drench of between 10 to 20 ppm can be utilized to speed up the growth of succulents. Plants could be sized up earlier for market and this may offer fixed cost savings (cost per square foot per week) to growers to help improve their economic bottom line.

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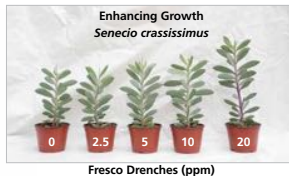


Figure 1. Growth of *Senecio crassissimus* was increased with Fresco drench rates between 10 and 20 ppm. Growth might be considered excessive with the 20-ppm rate.

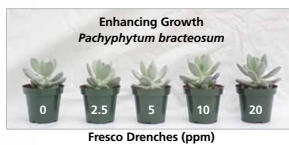


Figure 2. Larger plants of *Pachyphytum bracteosum* occurred with Fresco drench rates between 10 and 20 ppm.



Enhancing growth with Fresco

PGR Use Tips

Improve Rooting with Advocate

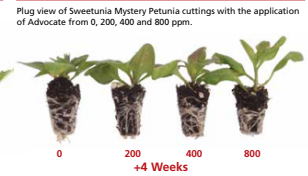
By Brian E. Whipker, North Carolina State University

Many growers now root their own cuttings in order to reduce shipping costs and ensure timely availability of plugs. Rooting ease varies among species and cultivars. To ensure a uniform rooting and consistency of these cuttings, growers need to optimize environmental and production factors. This includes the use of rooting hormones to speed up the rooting process and ensure the cuttings are uniformly rooted. The rooting hormone indole-3-butyric acid (IBA) is one such hormone that

helps growers produce a more uniform product in less time. IBA is available in multiple forms—from a talc powder or gel applied to the basal end of the cuttings as a dip to products for overhead spray applications. Historically, these 0.3% talc products have been commonly used, but are time-consuming to apply and pose the opportunity for disease transmission amongst cuttings. Recently, the greenhouse industry has shifted to applying



Plug view of Scala Blue *Scaevola* cuttings with the application of Advocate from 0, 200, 400 and 800 ppm.



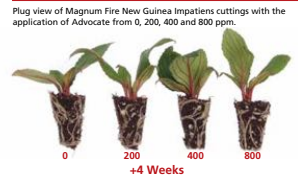
Plug view of Sweetunia Mystery *Petunia* cuttings with the application of Advocate from 0, 200, 400 and 800 ppm.



Plug view of Beauty Yellow *Argyranthemum* cuttings with the application of Advocate from 0, 200, 400 and 800 ppm.



Plug view of Broad Street *Coleus* cuttings with the application of Advocate from 0, 200, 400 and 800 ppm.



Plug view of Magnum Fire New Guinea *Impatiens* cuttings with the application of Advocate from 0, 200, 400 and 800 ppm.



Plug view of Dollar Princess *Fuchsia* cuttings with the application of Advocate from 0, 200, 400 and 800 ppm.

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Improving rooting with Advocate

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