BALLTECH ON DEMAND™

TECH TIP: CURB EXCESSIVE POINSETTIA GROWTH EARLY

Let's take a look at factors that can lead to early (October in North America) stretching in poinsettia crops and strategies to combat it before it's too late.

What Causes Poinsettias to Stretch?

There are several factors that can cause poinsettias to balloon up and get leggy at this stage in the crop cycle. It's easy to get into the weeds when it comes to plant physiology, so we like to put these factors into a few "buckets" to keep things simple:

Turgor. Commonly known as the "internal pressure of plant cells," excessive turgor causes stem and leaf cells to expand rapidly. Turgor pressure reaches excessive levels oftentimes when plants are well-watered and relative humidity (RH) in the crop canopy is high, so the main lines of defense against this are:

- Ensure that you establish thorough wet-to-dry cycles.
- Space plants in a timely manner when leaves of adjacent plants begin to overlap after pinch.
- Maximize airflow through your crop and dehumidify the greenhouse whenever possible if RH starts to exceed about 70%.

Shade avoidance. Remember that poinsettias are essentially a tropical shrub that we force to grow in cool, dark North American greenhouses from late summer through early winter. They don't like the shade … Though plant breeders have done wonders to better acclimate this staple crop to cooler, darker conditions, stretching often occurs when light levels are too low. As such, be certain that your shade curtain settings are adjusted to stay open now that we're into October, and rinse off that shading compound, especially if you put it on a little heavier this summer due to the extreme temperatures that many of us battled through August. Also, too-tight spacing can cause stretching due to competition for light—again, be sure to space plants in a timely manner after pinch once the canopy tightens.

Wrong fertilizer. Like garden mums, which many of you have also grown this season, poinsettias are heavy feeders. However, they don't require the same levels of phosphorous and ammonia-form nitrogen that mums really need to thrive. If you forget to switch from your mum feed (like 20-10-20) to something more nitrate-based like a Cal-Mag (15-5-15 or 17-5-17), growth will likely be much more lush than desirable. Over longer periods of use, ammonia-form nitrogen and high phosphorous will cause leaves and bracts will expand rapidly and stems will elongate more than desirable. It's ok to use a "softer" fertilizer like 20-10-20 before or shortly after pinch, but use of a nitrate-based feed for most of the crop cycle will yield tighter, more-toned growth.

And don't forget DIF—the difference between daytime and nighttime temperatures. Height and leaf expansion of poinsettias are fairly responsive to DIF and DROP strategies, so use your greenhouse air temperature to your advantage whenever possible to help curb stretching. Check out this ***GROWERTALKS ARTICLE*** *for a great summary of both strategies.*

PGR Proactively

When all else fails and growth is still ahead of where you want it, plant growth retardants (PGRs) are your friend. However, especially with poinsettias, it's best to apply PGRs earlier and at lower concentrations, rather than having to slam on the brakes at the last minute. Now that we're past the start of natural short days, PGRs need to be applied more carefully. Here are some tips to help ensure you apply them correctly.

- Paclobutrazol (Bonzi, Piccolo, Paczol) is the best active ingredient to use at this point.
- Don't use daminozide (B-nine, Dazide) and chlormequat chloride (Citadel, Cycocel, Altercel) after the 10th of October to avoid potential phytotoxicity or delaying coloring of bracts.

Drench – don't spray!

- A low-rate drench (0.1 ppm) will control growth evenly across the whole plant.
- Sprays will reduce stretch, but height suppression will be more localized to the upper foliage/bracts and provide limited control for stretch on lower nodes.
- Correct drench volume is critical. Apply 1 fl oz per inch of container diameter and add an additional 1 fl oz per additional plant in the same container (for example, drench volume for a 6-inch crop at 1ppp =is 6 fl oz; volume for an 8-inch crop at 3ppp is 10 fl oz).
- *A 0.25 ppm or higher paclobutrazol drench will bring crops to a dead stop.* As such, do not apply paclobutrazol at rates higher than 0.1 ppm at a given application event. Wait at least one week (or two) after an application to see how growth and development are affected before you decide to reapply.
- Use graphical tracking to determine how close to your finished spec you are before applying PGRs. Going with your gut will likely result in too-short plants at finish.

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