

GROWERTALKS

Columns

3/21/2012

Growers Talk Production: Seriously? Problems with Petunias? Again?

Rob O'Hara



ROB O'HARA

That was the question I had to ask myself again this year after rooting my first batch of petunias in week 51. The issues petunias and calibrachoa have with tip abortion and stunted growth are well documented and I thought I had it all figured out going into this new season. But I was in for a battle again.

The main culprit of this problem is a lack of calcium and/or boron uptake to the growing tips of the plants. When this distortion sets in and is not caught early, it's almost irreversible. This year, I figured I would have it beat by paying closer attention to my fertilizer applications. Within a couple of days of sticking, I began feeding with 100 ppm of a 20-8-20 feed followed by 200 ppm of a 13-2-13 plug feed as soon as there was callus. I felt great and everything was going well until about day 21. I saw

some bad signs again. On some varieties, I began to see slight yellowing on the leaves along with a lack of growth. I said to myself, "How could this be? I'm doing everything right this year!" Wrong!

Like many other growers out there, we're faced with all kinds of challenges, and I really needed to sink my teeth into this one to sort it out. I started consulting with some of our industry professionals and they were quick to point out a few details I had overlooked.

The first one I was overlooking was my fertilizer. The brand of fertilizer that I was using had some of the lowest micronutrients percentages in comparison to some of the other brands available on the market. This started to raise my eyebrows a bit and I realized I didn't have this issue a couple of years ago when I was using a different brand of fertilizer. The lower levels of boron that I was feeding my plants could definitely be part of the problem.

The next issue that was brought to my attention was my climate. I've always been a big preacher of keeping an active climate at all times with the best conditions for your plants to grow. A dead climate with high humidity is a recipe for all kinds of problems, and in this case, I wasn't taking my own advice. If a plant isn't

transpiring, it's not going to pull up the calcium and boron into the growing tips where it's needed. As a result, deficiencies can appear in the plant regardless of how much feed is being supplied.

My theory for propagation was to always try to keep the humidity high so that I can limit the amount of misting on the cuttings. That way I can avoid leaching the nutrients out of the cuttings before they're rooted. This isn't a bad theory, but only if you have one stage of rooting happening. In our operation, we keep plants in the same area for about 10 to 14 days until we move them to a cooler, less humid growing zone. My problem was beginning at about day 4 or 5 when the petunias were just starting to root. They were being treated too nicely and, therefore, not being forced to take up the nutrients I was providing. This resulted in giving me my calcium and boron deficiency and the stunted and aborted growing tips.

The corrective measures that I've put into place were pretty simple now that I think about it. I've adjusted my dehumidify settings to 75%, changed my fertilizer, and also incorporated an extra micronutrient package with my new fertilizer. This allows me to feed a bit lower Nitrogen without starving the plants of micronutrients. I'm now back to where I used to be with my petunia liners and the plants are responding well and growing better than ever. **GT**

Rob O'Hara is the head grower for Rainbow Greenhouses in Chilliwack, British Columbia, Canada.