# PANSY PLUGS NOT GROWING? YOU ARE NOT ALONE!

*by Paul A. Thomas and Bodie V. Pennisi, University of Georgia*

It seems that we are facing another unfortunate pansy mystery that is costing Southern growers large sums of money in lost sales. Over a dozen southeast greenhouse owners from all corners of the state of Georgia and South Carolina are reporting their pansy plug roots failed to grow out of the plug ball, failed to produce normal leaves and looked chlorotic or stunted. In a phrase, they "stalled out." Dr. Pennisi and I have visited several growers (5 as of this week) in a wide territory and found the symptoms to be almost identical. We have communicated by phone with at least 9 other growers in GA and SC. Meanwhile, within the industry, we are hearing hasty rumors about so and so's plugs not performing, so and so's soil causing the problem, so and so's PGR overdose and even a rumor of a massive outbreak of Thielaviopsis. Nonsense!

Seems it's time to curl back the pointed fingers, take a deep breath, and get the facts straight. Pansy growers in the Southeast do have a problem and we need to get to the bottom of it soon.

**Fact #1**: Three and possibly more national plug producers have been too hastily fingered. Given the diversity in their production practices, it is unlikely that the problems are solely or directly associated with the plug producers use of PGR's. Each has had its plugs show the same symptoms.

**Fact # 2:** Crystal Bowl does seems to be the most affected cultivar series, however, cultivars from other breeding companies are also affected, eliminating or reducing the likelihood of a genetic or breeder source for the problem. More importantly, many unaffected growers report having no problems from the same company, from the same ship week...this suggests that it is more likely a grower/site related problem.

**Fact #3:** In all cases, fertility levels tested were incredibly low, to the amazement of the grower who insisted they were fertilizing often and correctly. Daily irrigation does wondrous things to EC levels!

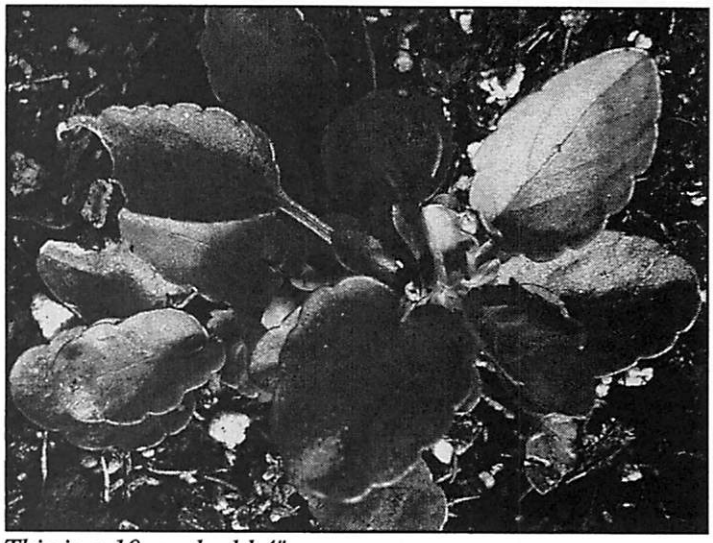
**Fact #4:** In most cases the pH was very high. 6.6 to over 7.8! Again, growers were amazed and stared in disbelief at our pH meters and our lab tests. Daily irrigation does wondrous things to soil pH too!

**Fact #5:** Fertility products from 6 different companies were used on affected crops so far, casting serious doubt on rumors that Scotts 15-2-20 or Daniels liquid fertilizer was at fault. Don't go there! There's no evidence at all.

**Fact #6:** No one disease has been attributed to the problem, thus casting doubt on a disease source at the plug producer. We have seen Thielaviopsis, Pythium and other diseases predominate in these stressed plants. Yet, some had no discernable disease and were strongly affected by stall. Likely not an epidemic.

**Fact #7:.** Four different soil products were used that we know of, eliminating any one soil company as the source of this problem. Again, we see no evidence to support soil being the cause.

**Fact # 8:** You are not alone despite what a sales rep may tell you. However, the distance between greenhouses, plug shipment date



*This is a 10 week old 4" pansey*

commonality and the symptomology time frame suggests it was mostly a weather related event in a four week plug shipment period, in a region bordered by the Alabama/ Georgia line across central, south and western Georgia, curving into south central South Carolina. Perhaps other areas are also affected? Crystal Bowl pansies may just happen to be sensitive to this set of circumstances.

The likely truth is that several major factors were very different this year that may have affected how you grew out your crop. There were also several changes to how some plug producers toned and shipped their plugs that may have...repeat, MAY have exacerbated the situation. We have much evidence that suggests that weather and slack growing practices may be the real culprit. Dr. Pennisi and I will cover that information in a separate article in this issue. However, having covered the facts, let us do this one right from the start:

**WE NEED YOUR HELP!**

The floriculture team at UGA needs more information to accurately size up this problem. To be accurate, unbiased and to prevent this from happening again, we need more, consistent and standardized field information to base our hypothesis on and propose some experiments to solve the problem. We do not have the time or travel funds to visit all of you in the Southeast that are calling and reporting the problems. If you believe you have experienced this problem this fall, please provide the following information listed below and send it to us by e-mail or snail mail. Those growers that previously reported problems to us or had a site visit from us, still need to fill out the card for their situation to be counted. Please take the time to share your observations. This will help everyone.

We will report the results, including a monetary crop loss estimate, and discuss any common factors discovered in the next issue of Southeastern Floriculture Magazine.... should we receive sufficient numbers of reports that provide the needed information. All southeastern growers are asked to participate if they feel they experienced this problem.

# Pansy Plug Problem Response Sheet

**Please provide the following information:** **(You may hand write this out or type it as you wish. Just do this ASAP!)**

**Name:**_____

**Address:**_____

**Phone:**_____

**Cultivars affected:**_____

**Source of plugs:**_____

**Ship date:**_____

**Crop week number (from plug tray):**_____

**Plant date:**_____

**Soil source:**_____

**Your water pH:**_____

**Fertilzer source:**_____

**Fertility regime for weeks one through four after transplant:**_____

**Location of crop just after transplant (outdoor or in greenhouse) :**_____

**Watering frequency weeks one through eight:**_____

**Average (estimated) day time temp:**_____

**Average (estimated) night temp:**_____

**Symptoms (Describe in chronological order) (Pictures are welcome!):**_____

**Co-incidental crop problems: Insects, diseases, over-watering?** _____

_____

**When stall symptoms first noticed?:**_____

**Did you consult an expert?** _____

**Attempted remedies:** _____

**End result of remedies:**_____

**Estimated value of known loss, as of November 1, 2000?** _____

**Your thoughts on what may have happened:** We very much want to know what you think happened....It's OK to postulate..... just be objective and include everything you think applies. We will not be sharing the raw data or your observations with any company....just the "averaged" report will be published in the magazine.

_____

_____

**Send this to:** **The University of Georgia Floriculture Team**
**215 Hoke Smith Building**
**Department of Horticulture**
**Athens GA 30602** **Email: Pathomas@uga.edu**

Your name will not be used in the publication of results, nor will it be provided to anyone outside the UGA floriculture team (Thomas, Armitage, van Iersel, Pennisi, Woodward, Oetting, and Hudson). We will review the facts as a group and report back in two months. In the mean time....test your soil fertility, pH and review your fertilization and watering practices. Let's get to the bottom of this quickly.

Many thanks in advance.
P.T.