

Pansy Pressure; Water Treatment: Watering Cactus

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COMING UP THIS WEEK:

Creating Active Environments
Nick's Tip: Pansy Diseases
OMAFRA Water Treatment Tips
Cactus Concerns
Success with Cuttings Video #3
At-Risk Crops
Finish Line ...

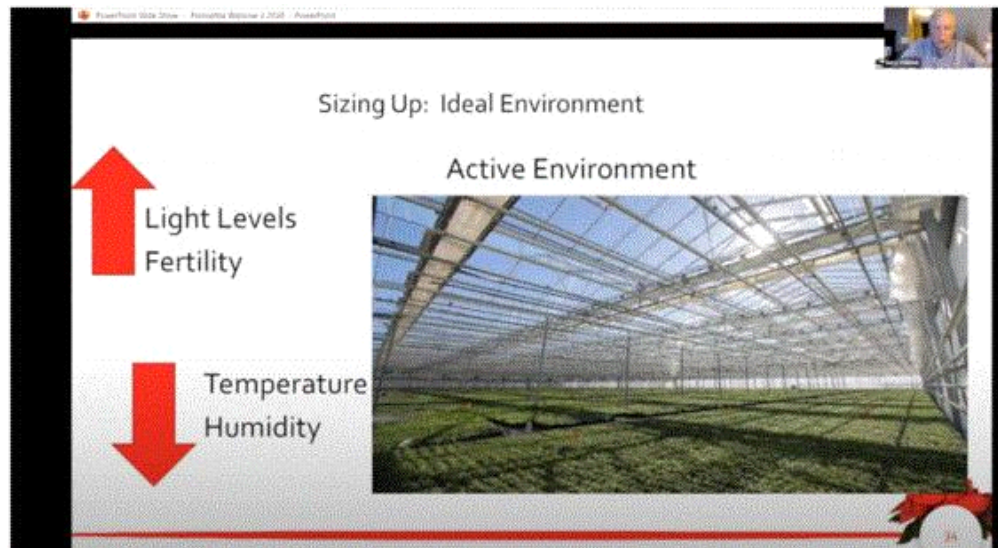


Creating Active Environments: Poinsettia Video #16

This week, the presenters from Selecta One explain what it takes to **CREATE AN ACTIVE ENVIRONMENT** for sizing up your poinsettia crop. It's our sixteenth video in the series and we are about halfway through the series.

The goal this time is to create an "active environment" using correct temperature, light and humidity strategies.

This session includes deep dives into Average Daily Temperatures (ADT), the relationship between day and night temperatures (DIF), light intensity, and daylength manipulation. It closes with a discussion about humidity and the impact it can have on a crop. There's a lot of excellent information in this video, and it's definitely one to share with your entire poinsettia production team.



Don't forget that all of these videos are available in a dedicated **YOUTUBE PLAYLIST** so you can stay on track growing your best crop ever. Now's the time to go back in the archive and re-watch these short videos to make sure your crew is on point with their poinsettia game.



Nick's Tip of the Week: Pansy Disease Pressure

Each week, I'll work with my partner in crime Nick Flax, a technical services expert at Ball, to share a concern that's come up during one of his numerous calls with growers across North America. This week he's tackling pansy disease, causes and solutions.

PROBLEM: This year's crop of fall pansies is coming along nicely, but I've gotten a few contacts this week about a disease that seems to have snuck up on a lot of North American growers. This is one of those fungal pathogens that doesn't usually have a rapid onset of early symptoms but can cause major problems if not managed quickly once they begin to appear.

Oftentimes, symptoms start as yellowing on lower leaves, which many growers mistake for a low nutrition response, so they increase their feed rate to correct the issue. It takes a few days for plants to bounce back from nutrient deficiencies, right? So, they up the feed and wait a few more days, but it only gets worse. By this time, the lower leaves have yellowed, plants have begun to wilt, roots have gone from discolored to black (true to its namesake), and the remainder of the production cycle is an uphill battle against ... yep, you guessed it: *Thielaviopsis* (a.k.a., black root rot).



NICK'S TIP: The three big questions here are: 1) How did we get to this point with disease development? 2) What can be done to prevent an outbreak? And 3) How does one remediate an outbreak when it occurs?

What encourages disease?

- Use of contaminated growing media and inadequate greenhouse sanitation measures
- Soil pH above ~5.6, soil temps between ~55–75 F and high moisture levels
- Reusing containers without properly washing and sanitizing them
- Large populations of fungus gnats and shore flies (can spread fungal spores)

Preventative measures:

- Plant into fresh media, avoid using field soil or floor sweepings from the headhouse, thoroughly clean between crops, and apply a sanitizing agent to all growing surfaces
- Regularly monitor soil pH, switch to a more-acidic fertilizer if pH rises above ~5.6, and allow thorough wet-dry cycles to occur between watering/feeding events.
- Do not use old flats/containers if possible. Thoroughly clean and sanitize with bleach or another sanitizer if you absolutely must reuse your plastic.
- Do not allow fungus gnat and shore fly populations to get out of hand. Growing on the “dry side” goes a long way, but apply insecticides labeled for these pests, if needed.
- Apply a fungicide drench to growing media (see below for best active ingredients)

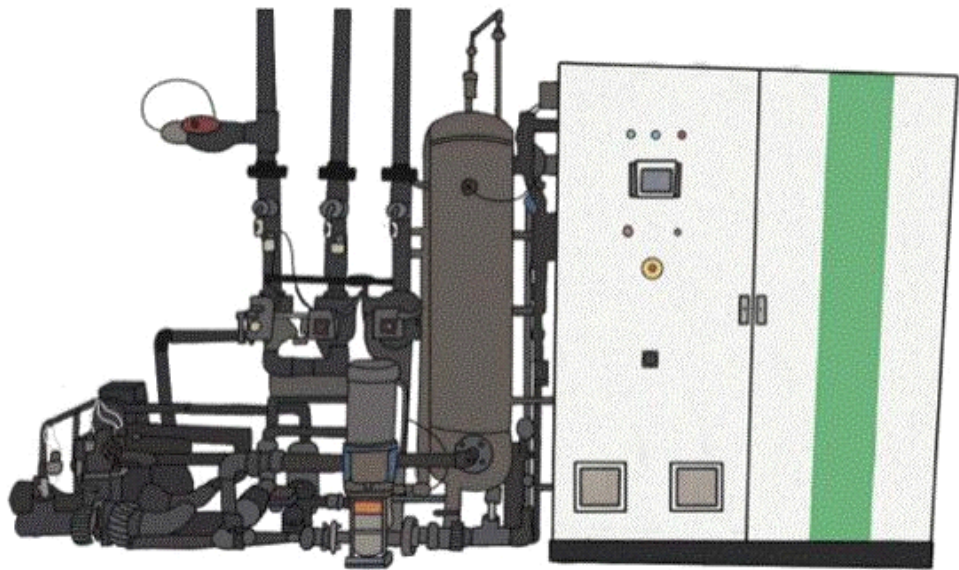
Outbreak remediation:

- Discard symptomatic plants, as they will only help to further spread disease
- Treat non-symptomatic plants with a fungicide containing fludioxonil, thiophanate-methyl or triflumizole
- Check soil pH and lower it to 5.4–5.5 if it is above optimal. This will discourage re-infection if spores are still present when fungicide efficacy begins to fade.
- Throw away all media of discarded plants along with containers. Don't be tempted to reuse them for other crops, either, as *Thielaviopsis* affects more than just pansies (petunia, vinca, etc.).

Water Treatment Guide for Greenhouses

Experts at OMAFRA (Ontario Ministry of Agriculture, Food and Rural Affairs) conduct a lot of research in floriculture production and offer many seminars, blogs and whitepapers covering a range of topics. I recently came across a series on water sanitation that includes content that ranges from identifying problem areas and pathogens to watch for, to how to sample your water and interpreting DNA tests for pathogens in water.

The latest article discusses water treatment options and **HOW TO DETERMINE WHAT SYSTEM TO CHOOSE.**



As the article states: If you don't currently treat your water it may be time to seriously consider a treatment system. Along with sourcing pathogen-free cuttings, making sure your water source and water-holding tanks are problem free, and practicing good sanitation in your greenhouse, water treatment to reduce pathogen loads is an important step to reducing losses from fungal and bacterial diseases.

Looking into water treatment technologies can be overwhelming, though, as there are many options out there and you need to consider your operation specifics. Add in the initial and ongoing costs, and the decision can be a complex one. Thankfully, this publication addresses these concerns quite well. Check it out!



Tech Tip: Wet Cactus Cracking

A grower noticed this cracking in his cactus crop and contacted the Tech On Demand team to

find out what was happening. Generally, when you see cacti with vertical cracking, it's due to plants being overly wet. Here's the recommendation:



Dry these down to a moisture level two or one as quickly as possible and don't water them above a three until the cracking stops.

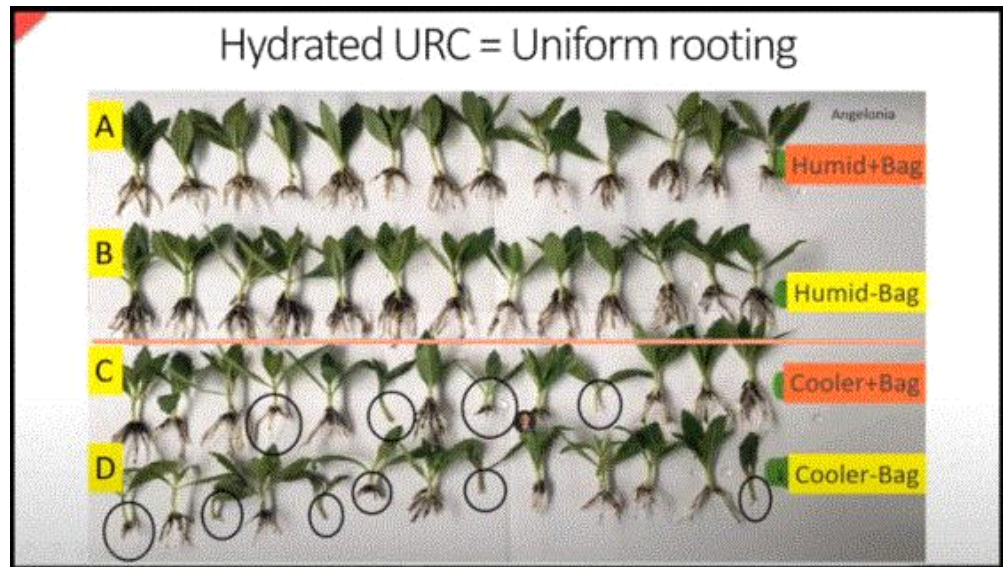
Remember, on the one-to-five moisture scale, a moisture level two leaves soil tan in color and when the soil is squeezed, you should feel residual moisture (but not free water) on your fingers. At level one, soil is light tan in color, and you should feel little to no residual moisture in a handful of media. Moisture level three is brown in color but not black like in the photo and you should not be able to squeeze more than a few drops of water out of a handful of media.

Success with Cuttings: Video #3

Next up in our ongoing "Success with Cuttings" video series builds upon last week's session on

receiving and storing cuttings.

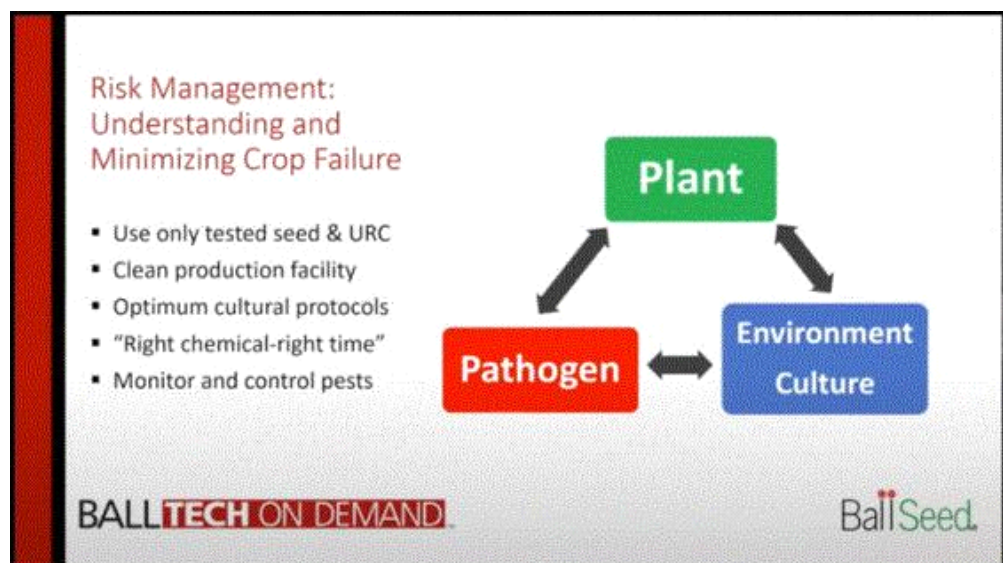
Drs. Todd Cavins and Nathan Jahnke address some specific protocols to follow to ensure healthy young plants prior to sticking in **SUCCESS WITH CUTTINGS (PART 3) PROPER STORAGE = HAPPY CUTTINGS.**



They show examples of properly- and improperly-hydrated cuttings, share tips for cooler settings, prioritize your cuttings to determine what needs to be stuck first, and wrap up with some “don’ts” to avoid stress and breakdown.

At-Risk Crop Control Strategies

As we head into spring production, it might be a good idea to get a refresh on some of the more risky crops you’ll grow for 2022—crops like geraniums, tomatoes, impatiens and even some perennials like hosta. Each of these (and more) are inherently disease-prone, but you can mitigate the risk by establishing tight protocols for your production team.



For new growers and veterans alike, creating a plan for at-risk crops—and sticking to that plan!—

is always a good idea. Here's a link to an overview [VIDEO](#) and a [DOCUMENT](#) covering basic control strategies you can share with your crew.

Remember the “disease triangle” and consider posting it in a visible place. Yes, it's basic but ... *very critical.*

Finish Line ...

That's it for this week! In the essence of time, I'll close by relaying some good news I heard regarding fall crops in 2021. Talking with technical experts, it sounds like there have been very few issues with poinsettias so far this season. Hopefully that's the case in your greenhouse, as well.

Similarly, I am hearing positive early-fall reports on sales, and anecdotal stories about early demand from shoppers. If you sell direct to consumers, now is the time to start priming the pump and sharing all of the fun fall messaging to get folks excited. Restaurant and grocery stores are pushing the pumpkin spice already, my kids spotted Halloween decorations on the way to school this week, and Bossman Beytes reports that there's a giant spider climbing a house in River Ridge! Might as well join the marketers and create some early demand.

Have a fantastic week!

As always, my email is bcalkins@ballhort.com if you have any comments, suggestions or challenges we can help solve.



Bill Calkins
Editor - Tech On Demand

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