

# GROWERTALKS

## Columns

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## The Big 3: Downy Mildew, Botrytis and Thrips, Oh My!

*Dr. Roger C. Styer*

Now that May is upon us, most growers are busy shipping, selling and hoping for good spring weather. But this is also the time of the year when the “Big 3” problems tend to pop up and get out of control.

Hopefully, you haven’t seen problems with impatiens downy mildew in your greenhouse. If you have, then you have a big job on your hands to properly dispose of diseased plants, disinfect the area and protect the rest of the seed and double impatiens. Remember, this disease has three different spores—a swimming spore spread in water but short-lived; a wind-blown spore produced by the millions; and a long-lived spore that drops to the ground. By the time you see symptoms under the bottom leaves, the wind-blown spores are all over the place. That’s what makes this disease so devastatingly hard to control once it starts. Best control is to protect plants with preventative fungicide applications. A Subdue Maxx + Adorn drench before transplanting or right before shipping finished crops will give several weeks control. Weekly spray rotation with Stature, Segway, Protect, Micora, Pageant and Fenstop in between drenches will be needed. You don’t want to ship out plants that are diseased or unprotected, since this disease is spreading throughout the country. Remember, New Guinea impatiens and SunPatiens are resistant to this downy mildew, but all varieties of seed and double impatiens are not.

Second, botrytis can become a serious problem for selling and shipping plants that are flowering when the weather doesn’t cooperate. No one wants to clean off diseased flowers before shipping, and if botrytis starts underneath the leafy canopy of most crops, it can result in loss of plants. Botrytis produces a gazillion spores spread by wind or touching plants, and needs just four hours of free moisture on plant surfaces to infect. Moisture management and humidity control are your two best cultural weapons for control. Spacing plants, dumping old ones and air movement in the houses will also help. Finally, a good rotation of fungicide sprays should be done when needed. When plants are green, you can use Daconil, Chipco 26019, Protect and copper fungicides, as they often leave residues and can damage flowers. When plants are flowering, use Decree, Medallion (be careful spraying on geraniums and impatiens!), Pageant and Cease. But make sure that plants dry quickly after spraying so as not to promote more botrytis with the wetness on the plants. Spray when the weather dictates botrytis will be more prevalent, not just on a weekly schedule. And be aware that resistance to some of the above fungicides is starting to show up due to overuse.

Finally, that ever-present pest—thrips! If you haven't thrown up your hands in complete surrender, then make sure you have a solid pesticide rotation and are getting the chemicals where they need to be to control these sneaky insects. Thrips like to hide in flowers and feed on pollen, which makes them tough to control, as it's hard to get the pesticides into all of those flowers, especially hanging baskets. The insect life cycle speeds up greatly with warmer weather, so you may need to spray twice a week rather than once a week. And pesticide resistance is a big issue with thrips, as Conserve is not working for many growers and we no longer have Thiodan to use on greenhouse ornamentals. Good rotations include pesticides from three different modes of actions and generally applied twice in a row before rotating to another pesticide. The best chemicals to use include Avid + Azatin, Overture, Pylon (watch out for phytotoxicity!), Kontos, Mesurol, Botaniguard + Azatin, Pedestal and nematodes (Nemasys, Nemashield). Nematodes need to be applied when light levels are low and follow directions for application closely. Botaniguard, as well as No-Fly, Met-52 and Preferral, are relatively safe to use and no resistance has developed. Consult the labels of all the pesticides and fungicides and follow recommended rates and usage.

If you haven't controlled all of the Big 3 this spring season, then make plans on how to prevent them for next year. If you're doing a great job this year, then give yourself a pat on the back, but beware—these major problems can pop up at any time! **GT**

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