

## DOWNY MILDEW (PART 2)—MANAGEMENT



### Downy Mildew Management

*Without question, the best first line of defense in the battle against DM is to grow resistant varieties whenever possible.* Producing DM-resistant crops sets your customers up for success and reduces the risk of disease ripping through your greenhouse or garden center. The most significant DM-resistant crop on the market right now is bedding impatiens (such as Beacon and Imara). But plant breeders are constantly working on developing resistance in other crops affected by this group of diseases. Start with resistant plants, but beyond that there are other best practices to follow:

Purchase seed and young plants only from trusted sources. *Plasmopara destructor* (the pathogen that causes impatiens downy mildew—IDM) is not seed-borne, so this means it can only be shipped to you from one place in the supply chain: infected young plants. Note: This does NOT necessarily mean your supplier sent the pathogen to you if IDM shows up in your impatiens. IDM infects hosts via airborne spores that can blow into your greenhouse and can survive in alternative hosts in the landscape, such as jewelweed (*Impatiens capensis* and *I. pallida*). This does, however, highlight the importance of buying plugs from reliable suppliers who implement preventative DM control measures during plug production.

*Peronospora belbahrii*, on the other hand, which causes basil downy mildew, can be seed-borne. To minimize the risk of bringing infected inputs into your greenhouse, only buy seed that has been tested for DM or plugs from young plant suppliers who only sow tested seed.

Implement preventative controls in-house. Even if you're growing DM-resistant genetics and you've sourced seed and young plants from reliable suppliers, you need to continue managing DM in susceptible crops on your benches. Downy mildews generally need cool temps (upper 50s to upper 60s F) and high relative humidity to infect and develop, so minimize the relative humidity in your greenhouse, avoid excessive wetting of foliage, and increase airflow through the crop canopy to minimize the risk of infection.

As hard as plant pathologists have worked to develop strategies to manage this tricky group of pathogens in ornamentals, one thing is clear: good cultural practices alone are almost never enough to keep DM from striking. The best method for controlling DM in coleus, impatiens, basal and other crops is an integration of good production practices and an aggressive fungicide program, with thorough rotation of FRAC codes/MOAs being made between applications.

Many products are labeled for controlling DM, but not all fungicides are created equal. If you want to take a deep dive into which fungicides best control different DMs, check out [THIS IR-4 REPORT](#), which contains recommendations based on almost 10 years of fungicide efficacy trials. Be forewarned: This report may be a little further down the rabbit hole than many of you may want to go, but there's excellent info to be found in the document.

### **Some Resources**

For those of you who are looking to scratch the surface a bit more but not go overly deep, check out the following links to some user-friendly resources our Tech On Demand team put together on managing IDM and basil DM. And as always, don't hesitate to [REACH OUT](#) if you have any questions—DM is a tricky group of pathogens!

[At-Risk Crops: Impatiens \(video with Dr. Will Healy\)](#)

[At-Risk Crops: Impatiens \(PDF\)](#)

[At-Risk Crops: Basil \(video\)](#)

[At-Risk Crops: Basil \(PDF\)](#)