

How to manage impatiens downy mildew in the landscape

Diseased impatiens may have been sold at retail

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Downy mildew has been reported on bedding impatiens at retail. Although this report has not been confirmed, home gardeners and the landscape industry should be watchful for this potentially devastating problem.

Look for these symptoms. Tell-tale symptoms include a white coating of spores covering the undersides of leaves (Photos 1-3). This can go unnoticed unless the leaves are turned over and inspected. Infected leaves may appear yellowish, small, or cupped down (Photo 4). Advanced infections result in defoliation of the plant leaving bare, leafless stems.

Know which plants are at risk. Impatiens downy mildew infects standard bedding impatiens and double impatiens that are often used in hanging baskets. Impatiens downy mildew is different from cucurbit downy mildew. Impatiens downy mildew does not infect cucumbers or squash (or any vegetable) or any flowers besides standard bedding and double impatiens and balsam. New Guinea impatiens are resistant to downy mildew.

Select impatiens carefully. Inspect plants for disease symptoms (Photo 5) prior to purchase and before planting. Specifically, look at the undersides of the leaves carefully. Little reddish spots are natural to the plant, but a coating of white indicates downy mildew disease. Moist, wet conditions and cool night temperatures favor the development of this disease. Impatiens downy mildew can be spread to new locations via shipment of infected plants. It also has a type of spore that can move long distances via wind, and can also be splashed by water to nearby plants. Healthy plants can become infected after planting into the landscape from airborne spores.

Michigan greenhouse growers have been proactive. Based on knowledge of impatiens and other types of downy mildew, MSU extension provided recommendations and educational programs for greenhouse growers and Master Gardeners. Commercial growers have used newly-developed fungicides to protect impatiens from downy mildew, but these fungicides do not protect plants once they go out into the landscape.

Consider using other shade-loving plants. New Guinea impatiens, begonias, and coleus thrive in shady areas and will not succumb to impatiens downy mildew. Specific information on some colorful choices for shady landscape beds can be found here.

http://msue.anr.msu.edu/news/alternative_choices_if_downy_mildew_infested_your_impatiens_last_year

Dispose of diseased impatiens immediately. Impatiens downy mildew has a survival spore that may allow it to overwinter in the soils of Michigan landscape beds. Diseased impatiens should be removed from the landscape immediately, placed in plastic bags that are then closed and placed in the trash. It is important to gather all plant debris from the landscape beds. Diseased

impatiens should not be composted. After removing infected impatiens from the landscape, do not replant impatiens.

Use Diagnostic Services at MSU. For assistance in identifying impatiens downy mildew, go to www.pestid.msu.edu. This site contains a submittal form that can be downloaded as well as instructions on how to send in samples. Questions and digital images may be submitted to pestid@msu.edu.

For more information on impatiens downy mildew, see these articles.

More information on downy mildew on impatiens.

(http://msue.anr.msu.edu/news/more_information_on_downy_mildew_on_impatiens/)

Impatiens downy mildew prevention and management. (

http://msue.anr.msu.edu/news/impatiens_downy_mildew_prevention_and_management)

Downy mildew on impatiens: disease detected in Florida.

(http://msue.anr.msu.edu/news/downy_mildew_on_impatiens_disease_detected_in_florida)

Downy mildew causing problems on impatiens in the landscape.

(http://msue.anr.msu.edu/news/downy_mildew_causing_problems_on_impatiens_in_the_landscape)

Controlling downy mildew on *Impatiens walleriana*. (<http://endowment.org/afe-news/press-releases/221-controlling-downy-mildew-on-impatiens.html>)

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Photo 1. When you turn a diseased leaf over, you can see the fuzzy, white spores of the downy mildew pathogen.



Photo 2. This is what the underside of a diseased leaf looks like under magnification. Note the large clusters of downy mildew spores.



Photo 3. Higher magnification shows the oval spores produced on stalks that extend out from the surface of the underside of the leaf.



Photo 4. Note the smaller, yellowed, diseased impatiens leaf on the left, compared to the healthy leaf on the right.



Photo 5. Plant stunting and absence of flower buds (see plant on the right) is another symptom of impatiens downy mildew.