

Cucurbit Downy Mildew Update 8/20/2024

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Cucurbit downy mildew (CDM) was confirmed in pumpkins in Morris County, NJ just south of Morristown last Friday. It is now possible that CDM will develop in any cucurbit crop in CT. There are 2 clades of CDM that affect different cucurbit crops. Clade 1 isolates preferentially infect watermelon, kabocha squash and giant pumpkin (both *Cucurbita maxima*), butternut squash, summer squashes, acorn squash, and Halloween pumpkin (all *Cucurbita pepo*). Clade 2 isolates preferentially infect cucumber and cantaloupe, usually arrives in New England first and we have reports of Clade 2 since this July. But this is the first report of Clade 2 north of Virginia this year.



Cucurbit downy mildew on pumpkin. Symptoms include angular yellow lesions showing fuzzy gray sporulation on the undersides. Look for chlorotic areas bordered by veins on the upper leaf surface (left). When conditions are moist, dark sporulation may be found on the lower leaf surface (right). Photos courtesy: Chris Cloutier, Rutgers Cooperative Extension.

Please check this out to see how the DM symptoms appear on giant pumpkin, Halloween pumpkins, and butternut squash:

<https://blogs.cornell.edu/liveqpath/gallery/cucurbits/downy-mildew-o-cucurbits-early-symptoms/>

Mobile fungicides are needed to effectively manage downy mildew on the underside of leaves but are at risk for resistance development. For pesticide resistance management, alternate among chemical classes and apply these products with protectant fungicides; note that this is a label requirement for some products. Orondis Ultra, Ranman, Zing! or Gavel, and Omega, are considered the most effective choices.

Efficacy recently in some research plots and commercial fields has been substantially reduced compared to when first available for several fungicides, including Revus, Forum, Presidio, Previcur Flex, Curzate, and Tanos. These changes are likely due to resistance having developed. Revus has exhibited variable control across crop types; efficacy has been poor on cucumber and excellent on pumpkin. Curzate and Tanos have limited residual activity, which partly explains poor control when applied on a weekly schedule. Phosphorous acid fungicides are not as effective for this DM as for others. Ridomil Gold, and the QoI fungicides (Quadris F, Quadris Opti, Flint Extra, Cabrio, Pristine, and Reason are no longer recommended because of resistance. (Source: 2024 Cornell Integrated Crop and Pest Management Guidelines, Cornell Cooperative Ext Publication)

Thanks to Margaret McGrath at Cornell University detailed information about downy mildew and its management for conventional and organic systems:

[**Biopesticides for Managing Cucurbit Downy Mildew Organically**](#)
[**Mobile Fungicides for Managing Three Major Cucurbit Diseases**](#)

If you suspect CDM in any of your cucurbit crops, please let me know at shuresh.ghimire@uconn.edu or 959-929-1031, so I can help to track this important disease.