



Vegetable Crop Update

A newsletter for commercial potato and vegetable growers prepared by the University of Wisconsin-Madison vegetable research and extension specialists

No. 17 – August 11, 2017

In This Issue

Late Blight and Early Blight Disease Forecast Updates
National & WI Late Blight Updates (tomato detections from Waukesha Co. 7/26, Pierce Co. 8/2, Dane Co. 8/7)
Cucurbit Downy Mildew Updates
Onion Downy Mildew in WI

Calendar of Events

January 21-23, 2018 – Wisconsin Fresh Fruit & Vegetable Conference, Wisconsin Dells, WI
February 6-8, 2018 – UWEX & WPVGA Grower Education Conference, Stevens Point, WI

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Current P-Day (Early Blight) and Severity Value (Late Blight) Accumulations (R.V. James, UW-Plant Pathology/R.V. James Designs): A P-Day value of ≥ 300 indicates the threshold for early blight risk and triggers preventative fungicide application. A DSV of ≥ 18 indicates the threshold for late blight risk and triggers preventative fungicide application. Red text in table below indicates threshold has been met/surpassed. “-“ indicates that information is not available. Blitecast and P-Day values for actual potato field weather from Grand Marsh, Hancock, Plover, and Antigo are now posted at the UW Veg Path website at the tab “P-Days and Severity Values.”

http://www.plantpath.wisc.edu/wivegdis/contents_pages/weather_%20list_2017.html

Location	Planting Date	50% Emergence	P-Day Cumulative	Disease Severity Value	Date of DSV Generation	Increase in DSV from 8/3
<i>Antigo</i>	Early 5/3	5/25	>104*	80*	8/10	13
	Mid 5/15	6/1	>104*	76*	8/10	13
	Late 6/1	6/15	>101*	66*	8/10	13
<i>Grand Marsh</i>	Early 4/10	5/15	628	96	8/11	6
	Mid 5/1	5/22	621	94	8/11	6
	Late 5/17	6/1	558	86	8/11	6
<i>Hancock</i>	Early 4/15	5/18	620	83	8/11	6
	Mid 5/5	5/30	557	73	8/11	6
	Late 5/20	6/5	519	73	8/11	6
<i>Plover</i>	Early 4/20	5/20	623	85	8/11	6
	Mid 5/8	5/25	598	74	8/11	6
	Late 5/25	6/8	501	73	8/11	6

Summary: Disease Severity Values (DSVs) and Late Blight Blitecast: All potatoes are at 50% emergence or greater. **All locations have reached threshold and should be considered for preventive fungicide application to manage the risk of late blight.** *We are again having problems with weather station components – batteries and modems are causing data drops. We are making replacements and working through these concerns. In the meantime, I am using DSV data generated through our UW Vegetable Disease and Insect Forecasting web tool (<http://agweather.cals.wisc.edu/vdifn/maps>) to

provide information for the Antigo location. The weather data which generates these values are from NOAA rather than in-potato-field stations; the values have been comparable this season prior to the station failure. Note that the site also now has insect phenological data available for several pests. Recall the maximum number of DSVs that one day can accumulate is 4. Once thresholds of 18 DSVs have been met, routine, protection of susceptible tomato and potato crops is recommended. Wisconsin commercial conventional fungicides for potato late blight control can be found at:

www.plantpath.wisc.edu/wivegdis/pdf/2017/Potato%20Late%20Blight%20Fungicides%202017.pdf

P-Days indicating early blight risk have exceeded threshold for several locations. Recall the threshold is 300 P-Days. Most commercial fields in central and southern WI have moderate symptoms of early blight and/or brown spot in the lower plant canopies. A number of fungicides are highly effective in limiting early blight and brown spot. For fungicide information:

<http://www.plantpath.wisc.edu/wivegdis/pdf/2017/July%208,%202017.doc.pdf>

National Late Blight Updates: <http://usablight.org> is a useful resource for the detection and characterization of late blight on tomato and potato crops from the U.S. **We had a new confirmation of late blight on tomato in Dane County, WI on August 7 from a commercial field. Previously, we had confirmed late blight on tomato in Waukesha and Pierce Counties Wisconsin (all US-23). All of the WI late blight has been genotyped as US-23.** Further, late blight was confirmed this past week in MA and NY (from usablight.org). Previous reports have come from ND, NY, PA, FL, MA, ME, MI, MN, NC, ON, PA, VA, WA, and WI. In all reported cases, with the exception of the WA case, the pathogen genotype was US-23. This has been the predominant genotype in Wisconsin, and across the U.S., in recent years. US-23 can still generally be managed well with use of phenylamide fungicides.

With reports on the rise, I recommend that growers of potato and tomato apply effective and preventive fungicides for late blight control. Additionally, all potato fields should be thoroughly scouted for late blight especially in areas that receive shading or may be compromised in some way from receiving thorough fungicide treatment (tree line, under/around irrigation pivots).

National Cucurbit Downy Mildew Updates: <http://cdm.ipmpipe.org/> offers information on the detection and characterization of the cucurbit downy mildew pathogen from the U.S. (and often Canada). In this past week, confirmations of downy mildew have come from IN, MI, NC, NY, SC, VA, and WV. Prior confirmations of this year were from: AL, DE, FL, GA, KY, MD, MI, MS, NC, NJ, NY, OH, ON, PA, SC, TX, and VA on a variety of cucurbits. The counties highlighted in red on map (below) have had disease reports within this past week; green counties indicate locations of confirmed disease this season, but greater than 7 days ago. No risk of movement of the disease to WI based on the current forecast (see risk map below).



Further details on use of fungicides in managing cucurbit downy mildew can be found at my previous newsletter #7 from June 3, 2017. Link below.

<http://www.plantpath.wisc.edu/wivegdis/pdf/2017/June%203,%202017.doc.pdf>

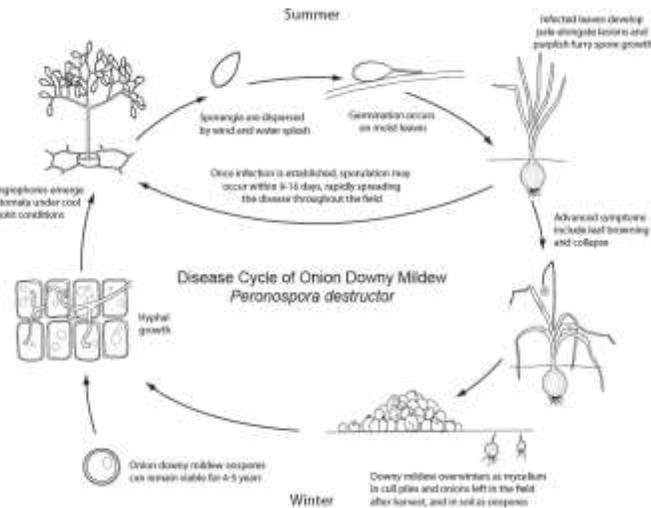


Onion Downy Mildew was confirmed in Walworth County, Wisconsin today in a commercial field. Onion downy mildew can be very problematic in onion fields. This foliar disease is caused by a fungus-like pathogen called *Peronospora destructor*. Infection is favored by temperatures less than 72°F and high humidity and leaf wetness. The pathogen can overwinter in volunteer onion, culls, and wild Allium weed species if the pathogen was present in your location in previous years. Symptoms include pale or white elongated patches on leaves that start off small and can elongate and produce a purple-gray sporulation which appears “downy.” Leaves can bend over and eventually die due to severe downy mildew infection. Please refer to picture below. This disease can impact bulb size, quality, and storability. Management recommendations include practicing a 3+ year rotation to non-hosts such as small grains and corn, eliminating culls and volunteers, avoiding dense planting, avoiding excess N and overhead irrigation, and orienting rows parallel to prevailing wind to avoid prolonged leaf wetness.

Effective fungicides for onion downy mildew control include:

ametoctradin+dimethomorph (**Zampro**)
 azoxystrobin (**Quadris, Amistar, others**)
 azoxystrobin + propiconazole (**Quilt Excel**)
 copper hydroxide (**Kocide, Champ, others**)
 cymoxanil + chlorothalonil (**Ariston**)
 cymoxanil + famoxadone (**Tanos**)
 dimethomorph (**Forum**)
 fenamidone (**Reason**)
 fluazinam (**Omega**)
 fosetyl-aluminum (**Aliette**)
 mancozeb (**Dithane, Manzate, others**)
 mandipropamid (**Revus**)
 mefenoxam (**Ridomil Gold**)
 oxathiapiprolin+chlorothalonil (**Orondis Opti**)
 oxathiapiprolin+mandipropamid (**Orondis Ultra**)
 pyraclostrobin (**Cabrio**)
 pyraclostrobin & boscalid (**Pristine**)
 zoxamide+chlorothalonil (**Zing!**)
 zoxamide+mancozeb (**Gavel**)

Although labeled for onion downy mildew, coppers and chlorothalonil are not very effective for downy mildew control, and coppers can be phytotoxic to onions. Please see the 2017 Wisconsin Vegetable Production Guide A3422 for further details on application rates and specifications. If you suspect you have Downy mildew in your onions, please get a sample and contact your county agent, our disease diagnostic clinic, or myself for confirmation.



The 2017 A3422 Commercial Vegetable Production in Wisconsin guide is available for purchase through the UW Extension Learning Store website: <https://learningstore.uwex.edu/Commercial-Vegetable-Production-in-Wisconsin2017-P540.aspx>

A pdf of the document can be downloaded or is available at the following direct link:

<https://learningstore.uwex.edu/Assets/pdfs/A3422.pdf>