



# Vegetable Crop Update

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

No. 21 – September 4, 2017

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Disease Predictor Updates for Early Blight (PDays) and Late Blight (DSVs)  
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## 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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In this past week late blight was confirmed on potato in Iowa Co. and tomato in Kenosha Co. Both samples were of the US-23 pathogen genotype. All of the tomato late blight has typed as US-23. The commercial potato late blight from Portage and Waushara Counties is US-8. The table below shows our late blight confirmations with pathogen genotype from the 2017 production season, to date.

County	Date Confirmed	Host Crop	Genotype
Waukesha	Jul 26	Tomato	US-23
Pierce	Aug 2	Tomato	US-23
Dane	Aug 7	Tomato	US-23
Portage	Aug 14	Potato	US-8
Waushara	Aug 16	Potato	US-8
Jefferson	Aug 16	Tomato	US-23
Iowa	Aug 21	Potato	US-23
Kenosha	Aug 23	Tomato	US-23
St. Croix	Sep 1	Tomato	Not yet determined
Polk	Sep 1	Tomato	Not yet determined

Wisconsin commercial conventional fungicides for potato late blight control can be found at link below, and at table at the end of this newsletter.

[www.plantpath.wisc.edu/wivegdis/pdf/2017/Potato%20Late%20Blight%20Fungicides%202017.pdf](http://www.plantpath.wisc.edu/wivegdis/pdf/2017/Potato%20Late%20Blight%20Fungicides%202017.pdf)

Across the nation this season, US-23 has predominated late blight outbreaks, with the exception of a US-8 detection in the state of Washington, and in our Portage and Waushara Counties here in Wisconsin. Recall that the US-8 genotype was in central Wisconsin potatoes during 2013 and 2014, but has not been detected since that time in our state. US-8 tends to prefer potato hosts over tomato, is of the A2 mating type and is resistant to mefenoxam/metalaxyl fungicides (ie: Ridomil). US-23 is an A1 mating type, is aggressive on both potato and tomato and is generally sensitive to Ridomil fungicides.

Continue to be vigilant in treating for and scouting for late blight even as crops senesce since plant sporulation can lead to tuber infections that may be asymptomatic at time of harvest. Treatment after

infection has less likelihood of successful control. We welcome any samples if you question a diagnosis or would like affirmation or genotyping.

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>

**Tomato and potato late blight samples can be submitted free of charge** to the UWEX Plant Disease Diagnostic Clinic (PDDC) or directly to my Potato & Vegetable Pathology program. We will confirm presence of late blight (or other diagnosis). If it is late blight, we will determine pathogen genotype, or strain type.

PDDC in Russell Labs, Dr. Brian Hudelson, UW-Madison campus: <https://pddc.wisc.edu/>

Potato & Vegetable Pathology, Dr. Amanda Gevens: UW-Madison campus: <http://www.plantpath.wisc.edu/wivegdis/>

**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  $\geq 300$  indicates the threshold for early blight risk and triggers preventative fungicide application. A DSV of  $\geq 18$  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](http://www.plantpath.wisc.edu/wivegdis/contents_pages/weather_%20list_2017.html)

<i>Location</i>	Planting Date	50% Emergence	P-Day Cumulative (8/25)	Disease Severity Value*	Date of DSV Generation	Increase in DSV from 8/25
<i>Antigo</i>	Early 5/3	5/25	-	<b>115</b>	9/4	18
	Mid 5/15	6/1	-	<b>111</b>	9/4	18
	Late 6/1	6/15	-	<b>101</b>	9/4	18
<i>Grand Marsh</i>	Early 4/10	5/15	<b>728+</b>	<b>139</b>	9/4	16
	Mid 5/1	5/22	<b>720+</b>	<b>137</b>	9/4	16
	Late 5/17	6/1	<b>657+</b>	<b>129</b>	9/4	16
<i>Hancock</i>	Early 4/15	5/18	<b>719+</b>	<b>125</b>	9/4	15
	Mid 5/5	5/30	<b>656+</b>	<b>115</b>	9/4	15
	Late 5/20	6/5	<b>618+</b>	<b>115</b>	9/4	15
<i>Plover</i>	Early 4/20	5/20	<b>722+</b>	<b>128</b>	9/4	16
	Mid 5/8	5/25	<b>697+</b>	<b>117</b>	9/4	16
	Late 5/25	6/8	<b>601+</b>	<b>116</b>	9/4	16

**Summary:** Disease Severity Values (DSVs) and Late Blight Blitecast: **All locations have reached threshold and should be considered for preventive fungicide application to manage the risk of late**

**blight.** \*For DSV updates, above, I have generated values through our UW Vegetable Disease and Insect Forecasting web tool (<http://agweather.cals.wisc.edu/vdifn/maps>) to provide. 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](http://www.plantpath.wisc.edu/wivegdis/pdf/2017/Potato%20Late%20Blight%20Fungicides%202017.pdf)

P-Days indicating early blight risk have exceeded threshold for all locations. Recall the threshold is 300 P-Days. Most commercial fields in WI have symptoms of early blight and/or brown spot. 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>

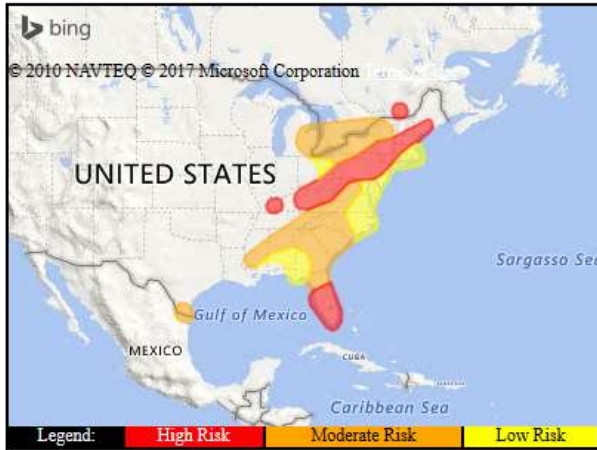
**National Late Blight Updates:** <http://usablight.org> is a useful resource for the detection and characterization of late blight on tomato and potato crops from the U.S. While WI had a few new counties with late blight confirmations this past week, there were no new additions across the nation. Previous reports have come from MN, ND, and parts of southern Manitoba Canada, and from usablight.org: CT, FL, MA, MB, MI, ME, MN, NC, ND, NY, ON, PA, WA, and WI. In all reported cases, with the exception of the WA case (US-8), and the US-8 finds in WI, the pathogen genotype was US-23.

**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, KY, MA, MI, NC, PA, and SC. Prior confirmations of this year were from: AL, CT, DE, FL, GA, IN, KY, MA, MD, MI, MS, NC, NH, NJ, NY, OH, ON, PA, QC, SC, TX, VA, and WV 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. **There is some predicted risk of movement of the disease to southeastern 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>

Risk prediction map for Day 2: Tuesday, September 5



**HIGH Risk** for cucurbits in central and southern FL, KY except the west-central, WV, southern OH, PA except the northwest, northern NJ, western MD, the southeast 1/2 of NY, western CT, western MA, southern VT and NH, southern ME, and near the QC source. **Moderate Risk** in deep south TX, northern FL, central MS, northern AL, GA except the southwest, SC, central and western NC, eastern TN, northern / western / southwest VA, eastern MI, southern ON, northwest PA, and western and northern NY. **Low Risk** for cucurbits in the FL panhandle, southwest PA, southern AL, eastern NC, eastern VA, central and eastern MD, DE, southern NJ, Long Island, eastern CT, RI, eastern MA, and eastern OH. Minimal Risk to cucurbits elsewhere.

Forecaster: TK at NCSU for the Cucurbit ipmPIPE - 2017