



# Vegetable Crop Update

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

No. 20 – July 22, 2016

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DSV (Blitecast, Late Blight) and P-Day (Early Blight) Updates  
Late blight and Cucurbit Downy mildew national updates

## Calendar of Events

**July 28, 2016** – UW-Hancock Agricultural Research Station Field Day  
**September 11, 2016** – UW-West Madison ARS Organic Vegetable Field Day  
**January 22-24, 2017** – WI Fresh Fruit & Vegetable Growers Conf. WI Dells  
**February 7-9, 2017** – UWEX/WPVGA Grower Ed. Conf., 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  $\geq 300$  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/pday\\_sevval\\_2016.html](http://www.plantpath.wisc.edu/wivegdis/contents_pages/pday_sevval_2016.html)

Location	Planting Date	50% Emergence	P-Day Cumulative	Disease Severity Value	Date of DSV Generation	Increase in DSV from 7/15
<i>Antigo</i>	Early 5/1	6/2	<b>391</b>	<b>60</b>	7/22	10
	Mid 5/18	6/7	<b>357</b>	<b>50</b>	7/22	10
	Late 6/3	6/21	<b>254</b>	<b>35</b>	7/22	10
<i>Grand Marsh</i>	Early 4/15	5/22	<b>482</b>	<b>73</b>	7/22	21
	Mid 5/1	5/27	<b>445</b>	<b>67</b>	7/22	21
	Late 5/15	6/3	<b>386</b>	<b>56</b>	7/22	21
<i>Hancock</i>	Early 4/18	5/24	<b>450</b>	<b>69</b>	7/22	15
	Mid 5/3	5/29	<b>410</b>	<b>56</b>	7/22	15
	Late 5/20	6/5	<b>353</b>	<b>47</b>	7/22	15
<i>Plover</i>	Early 4/20	5/25	<b>440</b>	<b>76</b>	7/22	16
	Mid 5/5	5/30	<b>397</b>	<b>61</b>	7/22	16
	Late 5/20	6/6	<b>341</b>	<b>52</b>	7/22	16

**Summary:** Disease Severity Values (DSVs) and Late Blight Blitecast: We now have all potatoes in WI at 50% emergence or greater and are generating forecast values for all potatoes. All growing areas have reached threshold for late blight management. Generally, conditions were moderately promotive for late blight in this past week with 7 day accumulations of 10-21

Disease Severity Values. Recall the maximum number of DSVs that one day can accumulate is 4. Where thresholds of 18 DSVs have been met, routine, protection of susceptible tomato and potato crops is recommended.

**The severe storms that recently moved through WI are good carriers and movers of pathogen spores.** In addition to moving spores, storms provide some crop damage and moisture which can be great promoters of many diseases. Consider tightening up your fungicide application calendar in this week following the storms. In fields in which you have been battling bacterial or other diseases, an application of copper containing fungicides as soon as possible can aid in limiting further spread of disease.

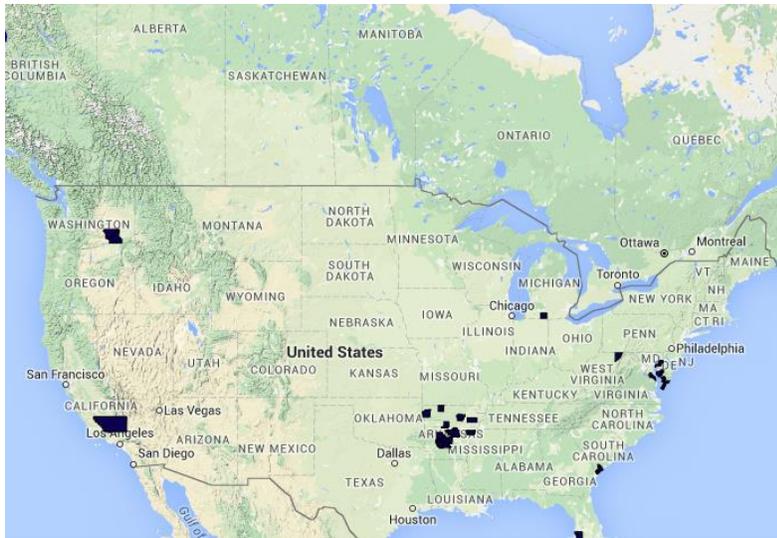
Wisconsin commercial conventional fungicides for late blight control can be found at: <http://www.plantpath.wisc.edu/wivegdis/pdf/2016/Potato%20Late%20Blight%20Fungicides%202016.pdf>

P-Days indicating early blight risk are now at or above threshold for all potatoes, with the exceptions of late plantings in the Antigo area. Lesions are being observed in the lower canopies of potato crops in central and southern WI. We have not noted much brown spot in potatoes, so far, this year.

**National Late Blight Updates ([www.usablight.org](http://www.usablight.org)).** As far as I am aware, no late blight has been detected in WI as of 7/22/16. No new reports of late blight in this past week (7/15-7/22). Earlier season's reports have come from AR, MD, CA, FL, MI, SC, VA, and WA. However, Western Manitoba, Canada (north of North Dakota) confirmed late blight in their potato production region last weekend. The closest detection to WI so far has been in south central MI (US-23) on potato volunteers. US-23 has predominated cases of this disease in the US so far this year. West coast has had US-8 and US-11 as well. Disease has been confirmed on both potato and tomato. Careful monitoring for and management of volunteers and solanaceous weeds is critical – along with preventive management of the main potato crop with use of effective fungicides. Summary table of recent pathogen strains and their character is provided below.

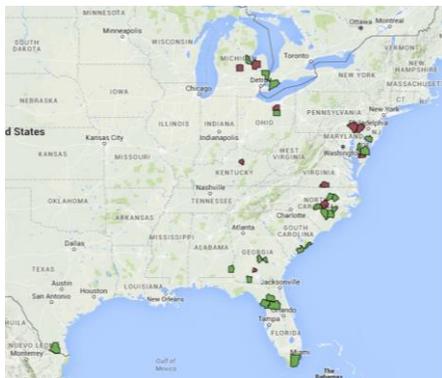
<i>Phytophthora infestans</i> genotype/strain (from recent detections in the US)	Mefenoxam/metalaxyl resistance status	Mating type and other comments on character (* indicates host preference)
US-8	Resistant	A2; infects tomato and potato*
US-11	Resistant	A1; infects tomato and potato
US-23	Sensitive (some insensitivity)	A1; infects tomato* and potato
US-24	Resistant	A1; infects tomato and potato*

If you are suspect late blight, please submit for free diagnostic testing through the UWEX Plant Disease Diagnostic Clinic or through my laboratory directly. Dr. Brian Hudelson in the clinic offers rather quick late blight confirmations. My program can do this, similarly, for commercial producers. Further my lab will genotype the pathogen in order to better prescribe best management strategies.

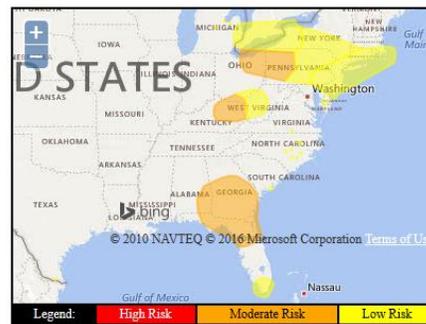


Current map of late blight confirmations in USA (7/22/16). Blue counties indicate that there was a late blight detection >1 week ago. Red counties indicate that there was a recent detection <1 week ago. Sourced from [usablight.org](http://usablight.org)

**Cucurbit Downy Mildew Updates (<http://cdm.ipmpipe.org/>).** In the past week there were 8 states reporting new confirmations of cucurbit downy mildew in the US: GA, KY, MD, MI, NC, OH, PA, and VA. Previous confirmations were made in AL, DE, FL, GA, MD, MI, NC, NJ, OH, SC, TX, and Ontario, Canada. The closest finds to WI at this time are in central and eastern MI and northeastern/central OH. No risk of movement of the pathogen to Wisconsin production region at this time, rather to the north and east of current field confirmations (figure below from <http://cdm.ipmpipe.org/current-forecast>).



Risk prediction map for Day 1: Friday, July 22



Moderate Risk in northern FL, the eastern panhandle, southeast AL, central and southern GA, eastern KY, far southern OH, and western PA. Low Risk for cucurbits in far southern FL, western WV, far eastern MI, southern NY, central and eastern PA, northern DE, NJ Long Island, CT, RI, and southeast MA. Minimal Risk to cucurbits otherwise.

Forecaster: TK at NCSU for the Cucurbit ipmPIPE - 2016