



# Vegetable Crop Update

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

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## Calendar of Events

**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/WPVGGA Grower Ed. Conf., Stevens Point, WI  
**March 1, 2017** – UWEX Processing Vegetable Crops Meeting, Hancock, WI

## Wisconsin Seed Potato Certification Program Transition. Dr. Patty McManus, Professor & Chair of the Dept. of Plant Pathology, UW-Madison.

UW-Madison Professor Amy Charkowski, who has directed the Wisconsin Seed Potato Certification Program since 2001, will be leaving Wisconsin in late September to take a position as Head in the Department of Bioagricultural Sciences and Pest Management at Colorado State University. While it is a great disappointment to see her leave, we congratulate Amy on this next exciting chapter in her life and thank her for countless contributions to the seed potato program, Department of Plant Pathology, College of Agricultural and Life Sciences (CALS), and to UW-Madison in general over the past 15 years.

In early September industry representatives and UW-Madison faculty will meet with CALS administration to discuss how the program might operate in the future, given state budget constraints. Likewise, the Department of Plant Pathology, which is the administrative and academic home for the program, will discuss how the program can be designed to best meet the future needs of the potato industry and the needs of the department. A transition team is in place to (i) oversee day-to-day operations and provide faculty back up to program staff when necessary; and (ii) consider options for how the program could be managed in the future. The team includes of Amanda Gevens (co-chair), Russ Groves (co-chair), and several members of the potato industry including growers, association representatives, and seed program staff. Gevens and Groves will handle issues related program management until a new director is in place, while the entire committee will engage in discussions related to the future of the program. If you have questions, concerns, or suggestions, please direct them to members of this team or to Patty McManus, Chair of the Department of Plant Pathology ([pmcmanus@wisc.edu](mailto:pmcmanus@wisc.edu) or 608-265-2047).

**Amanda J. Gevens, Associate Professor & Extension Vegetable Plant Pathologist, UW-Madison, Dept. of Plant Pathology, 608-890-3072 (office), Email: [gevens@wisc.edu](mailto:gevens@wisc.edu). Veg Pathology Webpage: <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/pday\\_sevval\\_2016.html](http://www.plantpath.wisc.edu/wivegdis/contents_pages/pday_sevval_2016.html)

<i>Location</i>	Planting Date	50% Emergence	P-Day Cumulative	Disease Severity Value	Date of DSV Generation	Increase in DSV from 8/20
<i>Antigo</i>	Early 5/1	6/2	<b>630</b>	<b>107</b>	8/20	13
	Mid 5/18	6/7	<b>596</b>	<b>97</b>	8/20	13
	Late 6/3	6/21	<b>493</b>	<b>82</b>	8/20	13
<i>Grand Marsh</i>	Early 4/15	5/22	<b>749</b>	<b>146</b>	8/26	7
	Mid 5/1	5/27	<b>712</b>	<b>140</b>	8/26	7
	Late 5/15	6/3	<b>653</b>	<b>129</b>	8/26	7
<i>Hancock</i>	Early 4/18	5/24	<b>696</b>	<b>145</b>	8/26	11
	Mid 5/3	5/29	<b>656</b>	<b>132</b>	8/26	11
	Late 5/20	6/5	<b>599</b>	<b>123</b>	8/26	11
<i>Plover</i>	Early 4/20	5/25	<b>667</b>	<b>167</b>	8/26	21
	Mid 5/5	5/30	<b>624</b>	<b>152</b>	8/26	21
	Late 5/20	6/6	<b>568</b>	<b>143</b>	8/26	21

**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 low to moderately favorable for late blight in this past week with 7 day accumulations of 7-21 Disease Severity Values, depending upon the location. 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. Wisconsin commercial conventional fungicides for potato late blight control can be found at: <http://www.plantpath.wisc.edu/wivegdis/pdf/2016/updated%20Potato%20Late%20Blight%20Fungicides%202016%20MOA.pdf>

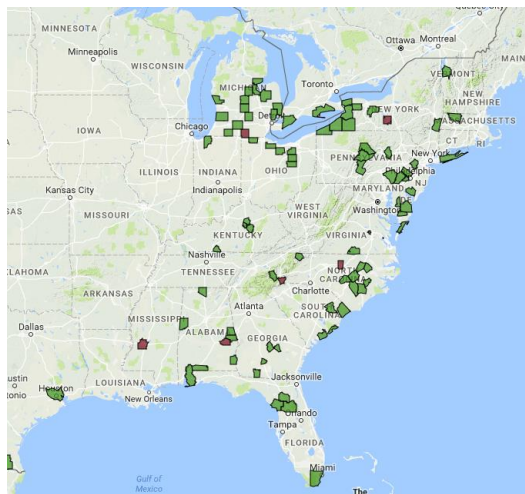
P-Days indicating early blight risk are now at or above threshold for all potatoes in Wisconsin. Lesions are being observed throughout canopies of potato crops throughout WI. We have not noted much brown spot in potatoes, so far, this year. Based on my early blight observations from our trials at the UW Hancock Ag Research Station, early blight is now at roughly 80% severity on ‘Russet Burbank’ planted during the first week of May 2016 with no early-blight-specific fungicides.

**Late Blight Diagnostic Updates.** **No new late blight confirmations from Wisconsin in this past week, as far as I am aware.** Recall, we have had just 3 farm confirmations from 2 counties, to date: Polk (tomato and potato, US-23, 8/15 & 8/22) and Dane (tomato, 8/18). Late blight was confirmed in Aroostook Co. ME on potato, Buncombe Co. NC on tomato, and Montgomery Co. VA on tomato in this past week through the national research and extension website in this past week ([www.usablight.org](http://www.usablight.org)). Earlier season’s reports have come from AR, MD, CA, FL, MI, SC, VA, and WA. Several regions of Canada have also confirmed potato late

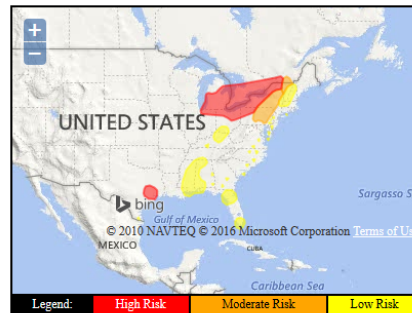
blight, including Western Manitoba, (north of North Dakota), and the Pert-Andover area of New Brunswick (north of Maine). US-23 has predominated cases of this disease in the US so far this year. West coast has had US-8 and US-11 as well. Disease has been confirmed on both potato and tomato. Careful monitoring for and management of volunteers and solanaceous weeds is critical – along with preventive management of the main potato crop with use of effective fungicides.

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.

**Cucurbit Downy Mildew Updates (<http://cdm.ipmPIPE.org/>).** In the past week there were 5 states reporting new confirmations of cucurbit downy mildew: AL, MI, MS, NC, and NY (counties colored red in map below from 8/26/16). Previous confirmations were made in AL, DE, FL, GA, IN, KY, MD, MI, NC, NJ, NY, OH, ON Canada, PA, SC, TX, VA, and VT (counties colored green in map below from 8/26/16). The closest past finds to WI at this time are in central IL (not recorded on map, but present based on disease reports from IL pathologist, Dr. Mohammad Babadoost). There is no risk of movement of the pathogen to Wisconsin production regions in the upcoming forecast for cucurbit downy mildew movement over the next several days (see below from <http://cdm.ipmPIPE.org/current-forecast>). However, the forecast was not calculated with the central IL report. Growers should be on watch for earliest symptoms of downy mildew for rapid response with effective fungicides (link below to treatment information). <http://www.plantpath.wisc.edu/wivegdis/pdf/2016/July%202013,%202016.pdf>



Risk prediction map for Day 2: Thursday, August 25



**HIGH Risk for cucurbits in central and southern MI, northern IN, northern OH, southern ON, northwest PA, western and northern NY, and southeast TX. Moderate Risk for central and eastern PA, central NY, northwest VT, and southern Quebec. Low risk for cucurbits in far eastern NY, western MA, southern and eastern VT, western NH, northeast KY, western AL, eastern MS, far southeast LA, northern FL, and southern FL. Minimal Risk to cucurbits elsewhere.**

Forecaster: TK at NCSU for the Cucurbit ipmPIPE - 2016

**Tomato anthracnose:** has been showing up on maturing and harvested tomato fruit over the past few weeks. Oddly, we've seen little early blight and septoria on tomato plants around the state this summer, but more anthracnose on fruit than I typically see through my farm visits and diagnostic processes. The disease is caused primarily by the fungus *Colletotrichum coccodes* which can cause both a fruit rot as well as a black dot root rot. This pathogen also causes disease on potatoes – most commonly as black dot, a tuber blemish disease that resembles silver scurf.

The pathogen survives on plant residues of host crops (potato, tomato, cucurbits, legumes, weeds) as well as in the form of microsclerotia, a fungal survival structure. The fungus can also be seedborne. The pathogen is most often splashed onto the tomato plants from soil creating lower plant and, most often, fruit infections. Ripe fruit are particularly susceptible to infection. The root rot phase of anthracnose is often exclusive to highly infested greenhouse environments. Wet, humid weather favors anthracnose on tomato. Crop rotation, weed control, field sanitation, and cultural practices including staking and mulching planted rows can limit disease. Harvesting fruit in a timely manner so that they are not overly ripe can help limit disease. Fungicides can be applied to prevent this disease. A photo of a tomato fruit with anthracnose is provided below (Photo Courtesy: Dr. Walt Stevenson, Emeritus Professor of Plant Pathology, UW-Madison).



**Anthracnose**

More information on anthracnose of tomato as well as other diseases and disorders of tomato can be found at:  
<http://learningstore.uwex.edu/assets/pdfs/A3799.PDF>