



Vegetable Crop Update

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

No. 24 – September 5, 2012

In This Issue

Late blight updates
Cucurbit downy mildew updates
Cucurbit powdery mildew

Calendar of Events

October 24&25 – Hancock ARS-Storage Research Facility, Potato Variety Harvest Expo, 8AM-4:30PM

Vegetable Disease Update – Amanda J. Gevens, Assistant Professor & Extension Vegetable Plant Pathologist, UW-Madison, Dept. of Plant Pathology, 608-890-3072 (office), Email: gevens@wisc.edu.

Vegetable Pathology Webpage: <http://www.plantpath.wisc.edu/wivegdis/>

Late blight updates: As of the time of this report, late blight has been confirmed in 8 WI counties, as listed in table below. Over the past month, late blight confirmations have come from potato and tomato, with all samples indicating the US-23 clonal lineage of the *Phytophthora infestans* pathogen. No new reports in this past week on potato or tomato in Wisconsin.

County	Crop	Date of Detection	Clonal Lineage of the Late Blight Pathogen
Barron	Potato/Tomato	31 July 2012	US-23
Adams	Potato/Tomato	31 July 2012	US-23
Portage	Potato/Tomato	2 August 2012	US-23
Oneida	Potato	4 August 2012	US-23
Waushara	Potato/Tomato	20 August 2012	US-23
Marathon	Potato/Tomato	22 August 2012	In process
Rusk	Tomato	23 August 2012	US-23
Sheboygan	Tomato	24 August 2012	In process

Continued scouting of susceptible tomato and potato crops is necessary to maintain healthy production through final harvest. Potato tubers below ground can continue to be susceptible even after vines have senesced. Please see last week’s newsletter article for further details on tuber blight (link below).

<http://www.plantpath.wisc.edu/wivegdis/pdf/2012/August%2022%202012%20Number%2022.pdf>

Nationally, new late blight reports in the past week have come from DE (tomato), NY (tomato), PA (tomato), and VA (tomato). To date this production year, late blight has been reported in CA, CT, DE, FL, MA, ME, NC, NH, NJ, NY, OH, PA, VA, VT, WI, and Ontario Canada. The

website: <http://www.usablight.org/> indicates location of positive reports of late blight in the U.S. and provides further information on disease characteristics and management.

In order to help better understand the epidemic at hand, please submit samples to my lab or work through your county agent and request that they send to me for genotyping. We are also offering free diagnostic services for potential late blight samples (along with the UW-Plant Disease Diagnostic Clinic). All we need to know is the county of sample origin. Lab address: Amanda Gevens, 1630 Linden Dr, Room 689, Plant Pathology Dept., University of Wisconsin, Madison, WI 53706. Please send infected leaves in a slightly inflated ziplock bag with no paper towel. Overnight shipping is best.

Current P-Day (Early Blight) and Severity Value (Late Blight) Accumulations. *Thresholds for both diseases have been met. Accumulations will continue to be provided until the end of potato production season. Thank you to Vaughan James for his efforts in this reporting.*

Location	Planted	50% Emergence	P-Day Cumulative	DSV Cumulative	Calculation Date
Antigo Area	Early 5/1	5/30	684	52	9/4
	Mid 5/10	6/6	647	52	9/4
	Late 6/1	6/16	580	52	9/4
Grand Marsh Area	Early 4/3	5/8	823	58	9/4
	Mid 4/15	5/16	776	58	9/4
	Late 4/30	NA	720	57	9/4
Hancock Area	Early 4/1	5/1	905	36	9/4
	Mid 4/15	5/10	848	30	9/4
	Late 5/1	5/17	804	30	9/4
Plover Area	Early 4/3	5/17	822	49	9/4
	Mid 4/19	5/18	757	49	9/4
	Late 5/1	5/27	694	45	9/4

Cucurbit Downy Mildew: has not been identified in Wisconsin at this time in commercial fields, home gardens, or our sentinel monitoring plots. Cucumbers and melons are wrapping up for the season, but winter squash and pumpkins continue to mature on vines. Several states have reported cucurbit downy mildew this season across a wide range of cucurbit hosts in AL, IN, KY, MA, MD, MI, MN, NC, NY, OH, and WV. **The newest reports within the past 7 days have primarily been on cucumber in KY and MI with closest new detects on cucumber in eastern central MN.**

No forecasted risk of movement of spores from states reporting detects to Wisconsin at this time. Disease forecaster, Tom Keever of North Carolina State University reports, “high risk for cucurbits central and eastern NC into southeast VA. Low to moderate risk for most of the rest of

the eastern U.S. and southern ON, with moderate risk from the lower Lakes down the East Coast, and low risk from the Ohio Valley to the central Gulf and from the DelMarVa into southern New England. Minimal Risk to cucurbits most other areas.” The website: <http://cdm.ipmpipe.org/> offers up to date reports of cucurbit downy mildew and disease forecasting information. Early detection and management of this disease is critical. If you suspect downy mildew, please contact your county agent, me, or submit a sample for confirmation.

Cucurbit powdery mildew: Powdery mildew has become very severe in pumpkin fields across the state. In average years, cucurbits can tolerate some powdery mildew without need for fungicides. However, when powdery mildew comes early, some cucurbits, particularly pumpkins, may need a fungicide to maintain health and quality of vines and fruit. The use of fungicides for controlling this disease may be necessary to maintain fruit quality, quantity, and storability if disease level becomes high and you’re raising a susceptible variety. While there is good varietal resistance in cucumber and watermelon, many pumpkin and squash varieties are susceptible to powdery mildew. Symptoms seen below in Figure 1 begin on lower, older leaves and can rapidly spread to petioles and ‘handles’ affected vigor and function of leaves. Infected stems can be very dry and brittle and often appear bleached out. Bleached and shattered or missing handles can impact marketability as well as storability of pumpkin fruit as the broken stem often leaves a wound site into which secondary and saprophytic microorganisms can enter and cause storage break down.

The timing of fungicide control measures is important, as some of the registered materials have reduced efficacy if applied after infection is well established. Among conventional fungicides labeled for squash and pumpkin powdery mildew, the following list includes those with good performance: Nova/Rally (myclobutanil), Procure (triflumizol), Pristine (pyraclostrobin + boscalid), Cabrio (pyraclostrobin), Topsin (thiophanate methyl), and Sovran (kresoxim methyl). It is recommended that the above-listed materials be tank-mixed and alternated with broad spectrum fungicides such as mancozeb or chlorothalonil to limit the development of pathogen resistance and to provide a fungicide program with a broad disease management scope. In organic production, there are products with some efficacy against powdery mildew: oils, bicarbonates, sulfur, and copper.

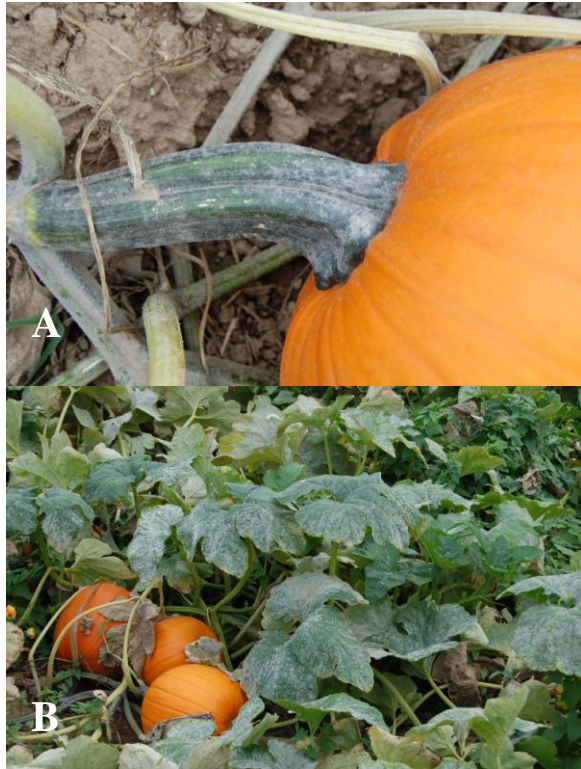


Figure 1. Powdery mildew on pumpkin. A. White powdery pathogen growth on pumpkin stem. B. Powdery mildew signs (white powdery spores) and symptoms (yellow/dying leaves). C. The spores of the powdery mildew pathogen that can be wind dispersed.



For further information on any fungicides that may be mentioned in this newsletter, please see the 2012 Commercial Vegetable Production in Wisconsin Guide A3422. An online pdf can be found at the link below or a hard copy can be ordered through the UWEX Learning Store.
<http://learningstore.uwex.edu/assets/pdfs/A3422.PDF>