



Vegetable Crop Update

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

No. 18 – August 15, 2014

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Calendar of Events

August 21 – 1:00PM Antigo Field Day, Antigo, WI
October 29-30 – Hancock Ag Research Station Fresh Market Potato Variety Trial Open House (Jeff Endelman), Hancock, WI

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



Late blight updates: Tomato late blight has been confirmed on tomato from Racine County yesterday, 8/14/14. The strain/genotype information is forthcoming. Earlier reports included, late blight US-23 confirmed on tomato in Milwaukee County (30 Jul) and US-8 and US-23 confirmed on potato from different fields in Portage County (18, 25 Jul). US-8 is an A2 mating type strain with resistance to

mefenoxam/metalaxyl fungicides. US-23 is an A1 type with sensitivity to mefenoxam/metalaxyl fungicides. Nationally, in the past week, there have been several new late blight reports from MA, MI, NY, ME, NY, ON Canada, OR, and PA on tomato, potato, and petunia (from MI). Recent reports are indicated on map above in dark red. All *P. infestans* isolates that have been genotyped from field samples in 2014, thus far, have been of the US-23 genotype/strain, with the exception of the Portage Co. WI US-8. Reports from >one week ago include FL, IN, MA, MD, ME, MI, NC, NH, NY, OR, PA, VA, VT, and WI. Details can be found at <http://www.usablight.org/>. The website provides location (by county) of positive reports of late blight in the U.S. and further information on the disease. Map was downloaded at 4:15PM 8/15/14.

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. NA indicates that information is not yet available as emergence has yet to occur. 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_2014.html

<i>Location</i>	Planting Date	50% Emergence	P-Day Cumulative	Disease Severity Value	Date of DSV Generation	Increase in DSV from last week (8/9)
<i>Antigo</i>	Early 5/20	6/9	506	65*	8/15	5
	Mid 5/27	6/16	458	65*	8/15	5
	Late 6/6	7/2	322	34*	8/15	5
<i>Grand Marsh</i>	Early 4/20	5/19	679	117*	8/15	11
	Mid 5/4	6/1	592	111*	8/15	13
	Late 6/3	6/23	415	76*	8/15	13
<i>Hancock</i>	Early 4/24	5/20	721	59*	8/15	4
	Mid 5/8	6/2	622	56*	8/15	4
	Late 6/3	6/24	433	38*	8/15	4
<i>Plover</i>	Early 4/21	5/20	640	117*	8/15	10
	Mid 5/5	6/1	555	114*	8/15	10
	Late 6/5	6/24	379	85*	8/15	10

Please note that we have surpassed the threshold for late blight DSVs (18) in all monitored areas for all plantings of potatoes. Please note: asterisks on the DSVs indicate that I have revised the value as displayed in the SureHarvest Blitecast daily output that is found at the UW-Vegetable Pathology website. In some cases, the number of hours of relative humidity above 90% was being issued as a value greater than 24 - giving unusually high DSVs for the individual day. I assigned a maximum DSV of 4 to such dates.

Preventive fungicide application for late blight control may include base protectants such as chlorothalonil or mancozeb, or include a base protectant tank-mixed with one of the reduced risk fungicides with specific activity in controlling late blight. Be mindful of the season-long limitations for use of chlorothalonil and mancozeb fungicides. Bravo and Echo products do have the WI special registrations for long season potato use of up to 16 lb active ingredient per acre. Other chlorothalonils do not have this special allowance and their use must be limited to 11.25 lb active ingredient per acre. Mancozeb use is limited to 11.2 lb active ingredient per acre. For further information on specific fungicide rates and activities, please find the 2014 updated list of potato fungicides for WI at the link below.

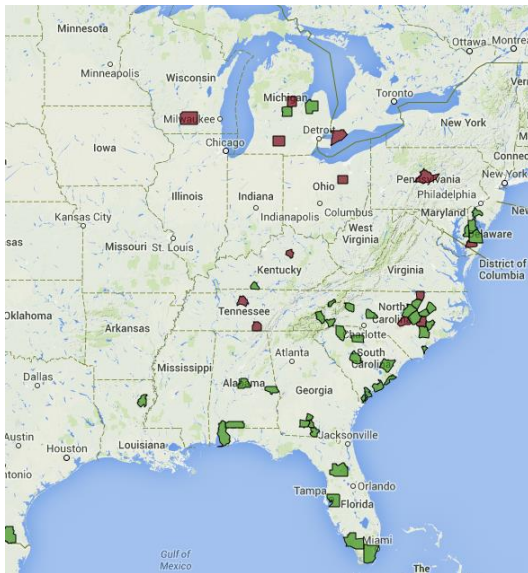
<http://www.plantpath.wisc.edu/wivegdis/pdf/2014/June%206%202014.pdf>

Further details on registered fungicides for WI vegetables can be found in the Univ. of WI Commercial Vegetable Production in WI Guide A3422, <http://learningstore.uwex.edu/assets/pdfs/A3422.PDF>.

P-Days and early blight management: P-Days are over the 300 threshold for potatoes of all planting dates at all locations. Recall, the P-Day 300 threshold is an indicator for timing the initial fungicide application for management of early blight. Early blight lesions are active now in lower canopies of earliest and some mid-planted potatoes in southern and central Wisconsin. We are offering our Potato Early Blight foliar fungicide trial up for visitors on Aug 18 (Mon)

and Aug 19 (Tues) at the Hancock Agricultural Research Station. Please contact me if you're interested in visiting to view efficacy of new programs (gevens@wisc.edu).

Cucurbit downy mildew updates: Downy mildew has been identified on cucumber in Dane County, Wisconsin, today. Preventive fungicide applications are recommended. The symptomatic plants that were found in field earlier today were destroyed and the remaining portions of the field have been treated with anti-sporulant fungicides for downy mildew control. In the past week, KY, MD, MI, NC, OH, ON Canada, PA, TN, and WI reported cucurbit downy mildew, as depicted in red on the map below. In summary this year, AL, DE, FL, GA, KY, LA, MD, MI, NC, NJ, SC, TN, and TX have reported cucurbit downy mildew across multiple cucurbit hosts. Based on the disease forecast system, there is moderate risk of spore movement from current sites of confirmation in Dane County WI to areas to the north (up to Green Bay) and east (to Milwaukee) – see forecast map below with risk area in orange. The website: <http://cdm.ipmpipe.org/> offers up to date reports of cucurbit downy mildew and disease forecasting information.



Locations of recent (red) and older (green) reports of cucurbit downy mildew in the U.S. in 2014. Map sourced from <http://cdm.ipmpipe.org/> from 4:22PM August 15, 2014.

Further information on cucurbit downy mildew: <http://learningstore.uwex.edu/Assets/pdfs/A3978.pdf>



There is moderate risk of spore movement from current site of confirmation in Dane County WI to areas to the north (up to Green Bay) and east (to Milwaukee) – see forecast map to the left with risk area in orange. Management information for cucurbit downy mildew can be found in UW Vegetable Crop Updates – Disease Supplemental #8 form 2013:

<http://www.plantpath.wisc.edu/wivegdis/pdf/2013/Disease%20Supplement%20Aug%202013.pdf>

Fungicide recommendations based on replicated research field trials from Dr. Mary Hausbeck at Michigan State University are provided to the right. Copper hydroxide applications as base protectants have also been shown to provide good preventive control of downy mildew and aid in management of bacterial diseases as well.

CUCUMBER

Apply at 7-day intervals **before** disease is confirmed.

Apply at 5-day intervals **after** disease is confirmed.

VINE CROPS

such as cantaloupe, melon, zucchini, squash, pumpkin and gourd

Apply at 7- to 10-day intervals **before** disease is confirmed.

Apply at 7-day intervals **after** disease is confirmed.

Use of the highest labeled rate of products is recommended.

- *Previcur Flex 6SC (2 day PHI)
- *Ranman 3.6SC (0 day PHI)
- Gavel 75WG (5 day PHI)
- Presidio 4FL (2 day PHI)
- Tanos 50WG (3 day PHI)
- Zampro 4.4SC (0 day PHI)

Alternate products and mix each with either:

- Dithane (mancozeb) 3 lb or
- Bravo (chlorothalonil) 2 pt

*Especially effective when disease pressure is severe.

UW-Extension/Madison Plant Disease Diagnostic Clinic (PDDC) Update. *Brian Hudelson, Ann Joy, Joyce Wu, Tom Hinsenkamp, and Catherine Wendt, Plant Disease Diagnostics Clinic*

The PDDC receives samples of many plant and soil samples from around the state. The following diseases/disorders have been identified at the PDDC from August 9, 2014 through August 15, 2014.

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
VEGETABLES			
Basil	Downy Mildew	<i>Peronospora belbahrii</i>	Kenosha
Melon	Cercospora Leaf Spot	<i>Cercospora</i> sp.	Green
Onion	Downy Mildew	<i>Peronospora destructor</i>	Jefferson
	Stemphylium Leaf Blight	<i>Stemphylium</i> sp.	Jefferson
Potato	Late Blight	<i>Phytophthora infestans</i>	Portage
Pumpkin	Phytophthora Root and Crown Rot	<i>Phytophthora</i> sp.	Rock
Squash	Angular Leaf Spot	<i>Pseudomonas syringae</i> pv. <i>lachrymans</i>	Sauk
Tomato	Bacterial Canker	<i>Clavibacter michiganensis</i> ps. <i>michiganensis</i>	Wood
	Late Blight	<i>Phytophthora infestans</i>	Racine
	Yellow Top	None	Dodge

For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu.

Fresh Market Potato Expo
University of Wisconsin Hancock Research Station
October 29–30, 2014

Interested in new varieties for the fresh market? Then you don't want to miss this year's Fresh Market Potato Expo, which will be held October 29–30 at the UW Hancock Research Station. More than 50 advanced breeding lines and recently released varieties will be on display, including russets, reds, yellows, fingerlings, and other specialty types. The official program begins at 1 pm on Oct. 29 with a presentation by Drs. Shelley Jansky, Ruth Genger, and Julie Dawson on "Specialty Fresh Market Potatoes: Flavor, Appearance and Yield." Afterwards, participants are invited to view, taste, and rate the varieties. In addition to the official program, the Expo is open 9 am – 4 pm both days as a self-guided event. For further information, contact Jeff Endelman (endelman@wisc.edu, 608-250-0754).