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 – August 30, 2014

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Calendar of Events

October 29-30 – Hancock Ag Research Station Fresh Market Potato Variety Trial Open House (Jeff Endelman), Hancock, WI
January 13-15 – Wisconsin Crop Management Conference, Madison, WI
January 26-28 – Wisconsin Fresh Fruit & Vegetable Growers Conference, Wisconsin Dells, WI
February 3-5 – UWEX & WPVGA Grower Education Conference, Stevens Point, WI

The University of Wisconsin Hancock Agricultural Research Station is pleased to announce the hiring of Mr. Troy Fishler who will join the station as the new Storage Research Facility research manager on September 1, 2014. Troy brings many years of potato industry and storage experience to this position. We look forward his collaboration, leadership, and continued work in support of the industry.

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: ***Wisconsin:*** There were several new late blight confirmations in Wisconsin this past week including additional detections in Waushara Co. on potato (US-8), Oconto Co. on potato and tomato (not yet typed), Waukesha on tomato (US-23), Portage on potato (US-8 & 23), and Marinette Co. on tomato (US-23). Earlier reports included Portage, Milwaukee, Adams, Waushara, and Racine Counties. US-23 is an A1 mating type strain with sensitivity to mefenoxam/metalaxyl. US-8 is an A2 mating type strain with resistance to mefenoxam/metalaxyl fungicides. Map above was generated from usablight.org website data at 10:48AM Aug 30, 2014.

Nationally: In the past week, there have been several new late blight reports from NC, NY, and PA. Recent reports are indicated on map above in dark red. Most (~92%) of the *P. infestans* isolates that have been genotyped from U.S. field and garden samples in 2014, thus far, have been of the US-23 genotype/strain, with the exception of US-8 in a few WI counties, a New Type B 2014 from NY, and US-24 from OR. Reports from >one week ago include CT, FL, IN, MA, MD, ME, MI, NC, NH, NJ, NY, OH, ON Canada, OR, PA, VA, VT, WI, and WV. 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.

Last week, several growers and industry partners met to discuss late blight at the Hancock Ag Research Station. I offered the presentation, linked below, which aims to summarize the current status and management of late blight for Wisconsin (with nationally summary info). **Weather has been especially favorable for late blight and with the concerns of late season tuber infection as well as the potential for mating of the pathogen strains (soilborne oospore risk), it is critical that measures be taken to continue to protect the crop with appropriate fungicides and cultural measures.**

http://www.plantpath.wisc.edu/wivegdis/pdf/2014/Gevens%20LB%20Presentation%20HARS%202014%20-%20Copy.pdf

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

Location	Planting Date	50% Emergence	P-Day Cumulative	Disease Severity Value	Date of DSV Generation	Increase in DSV from last week (8/22)
Antigo	Early 5/20	6/9	**632**	**88***	8/29	6
	Mid 5/27	6/16	**585**	**88***	8/29	6
	Late 6/6	7/2	**449**	**57***	8/29	6
Grand Marsh	Early 4/20	5/19	**800**	**145***	8/29	12
	Mid 5/4	6/1	**713**	**139***	8/29	12
	Late 6/3	6/23	**536**	**104***	8/29	12
Hancock	Early 4/24	5/20	**845**	**88***	8/29	15
	Mid 5/8	6/2	**746**	**85***	8/29	15
	Late 6/3	6/24	**557**	**67***	8/29	15
Plover	Early 4/21	5/20	**752**	**145***	8/29	13
	Mid 5/5	6/1	**668**	**142***	8/29	13
	Late 6/5	6/24	**491**	**113***	8/29	13

Please note that we have surpassed the threshold for late blight DSVs (18) in all monitored areas for all plantings of potatoes. 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.

We specifically discussed use of phosphorous acid products (ie: Phostrol) and mancozeb (ie: Dithane) for late season potato late blight management for tuber disease control in conventional systems at our 8/25 Hancock Late Blight meeting. Use of Phostrol as a foliar fungicide application has been shown to create tuber resistance to late blight (and pink rot) in studies from multiple states. Phostrol is at times associated with some phytotoxicity depending upon environmental conditions, spray volume, and rate. However, a little phytotox prior to chemical vine kill is not a bad thing. Mancozeb use late in the spray program can aid in limiting tuber infection by late blight spores. 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.

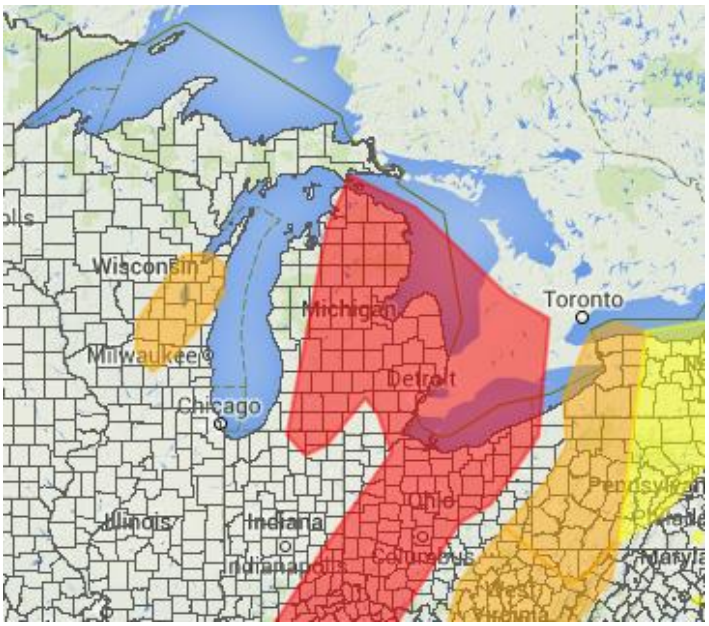
Cucurbit downy mildew updates: Downy mildew was confirmed on cucumber in Green Lake County, Wisconsin on Friday August 29, 2014. This is the second confirmed cucurbit downy mildew finding in WI at this time. However, it is likely that more infection is out there, but may not be recognized or confirmed. **Preventive fungicide applications are recommended.** In the past week, MI, NY, OH, PA, WV, and WI reported cucurbit downy mildew, as depicted in red on the map below (Green Lake Co. report does not yet appear on the map). In summary this year, AL, DE, FL, GA, KY, LA, MA, MD, MI, NC, NJ, NY, OH, ON Canada, PA, SC, TN, TX, WI, and WV have reported cucurbit downy mildew across multiple cucurbit hosts. Based on the disease forecast system, there is moderate risk of spore movement from the older site of confirmation in Dane County WI to areas to the north (up to Green Bay) and east (towards 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.

National reports of cucurbit downy mildew

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 9:50AM Aug 30, 2014.

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



Sat Aug 30, 2014 Cucurbit Downy Mildew Forecast (http://cdm.ipmpipe.org/current-forecast) accessed 8/30/14 at 9:47AM. There is moderate risk of spore movement from older site of confirmation in Dane County WI to areas to the north (up to Green Bay) and east (toward Milwaukee) – see forecast map to the left with risk area in orange. Green Lake County WI report has not yet been integrated into the forecast – but will be reflected in upcoming forecasts. Management information for cucurbit downy mildew can be found at: http://www.plantpath.wisc.edu/wivegdis/pdf/2014/August%2015%202014.pdf

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 23, 2014 through August 29, 2014.

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
VEGETABLES			
Pepper	Tomato Spotted Wilt	*Tomato spotted wilt virus*	Columbia
Squash (Acorn)	Root Rot	*Pythium*	Monroe
Sweet Corn	Northern Corn Leaf Blight	*Exserohilum turcicum*	Columbia
Potato	Cercospora Leaf Blotch Early Blight Late Blight	*Cercospora* sp. *Alternaria solani* *Phytophthora infestans*	Columbia Columbia Portage
Tomato	Early Blight Late Blight Septoria Leaf Spot Sour Rot	*Alternaria solani* *Phytophthora infestans* *Septoria lycopersici* *Geotrichum* sp.	Columbia Marinette, Waukesha Columbia, Dane Dane

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

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Cost-share funds available for certified organic producers: In past years, funds have been available through the Federal Crop Insurance Act (FCIA) to reimburse organic farmers for a portion of their annual certification costs. Those funds are once again available in 2014, with the organic cost share program reimbursing individual organic operators up to 75 percent of their 2014 (October 1, 2013 through September 30, 2014) certification costs up to a maximum of $750 per category of certification (crops, livestock, processing/handling, and wild harvest). To apply for these funds, contact your certification agency or visit the Wisconsin Department of Agriculture, Trade, and Consumer Protection (http://datcp.wi.gov/Farms/Organic_Farming/Cost_Share_Program/). Applications must be postmarked by November 15, 2014. For further information, contact Juli Speck, 608-224-5134.