



Vegetable Crop Update

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

No. 26– August 7, 2015

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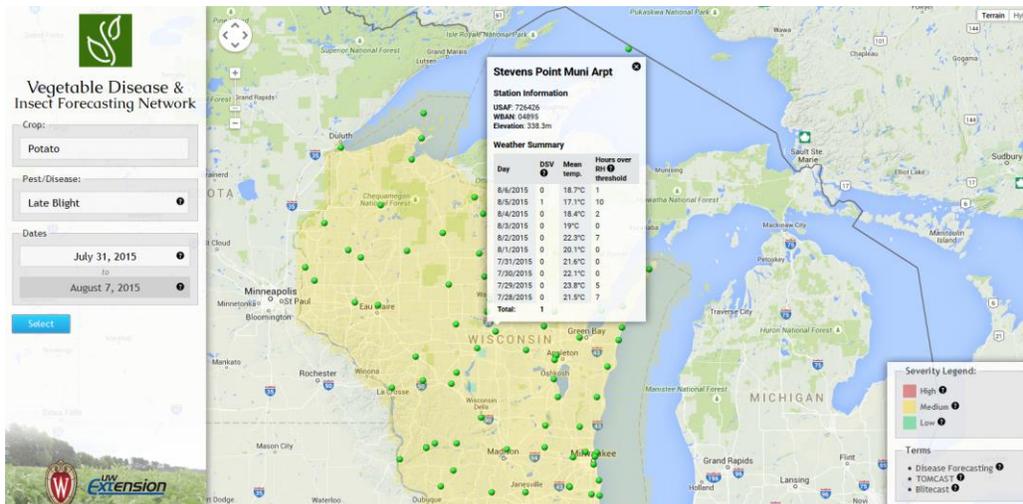
- Disease forecasting values for early blight and late blight
- Late blight updates
- Cucurbit downy mildew updates
- Hop Summer Field Day Program
- Langlade County Airport Field Day Program

Calendar of Events

- August 14** – UWEX/DATCP/SARE Hop Summer Field Day, 1-4:30PM Davali Ridge Farm, Waterloo, WI
- August 15** – UWEX/DATCP/SARE Hop Summer Field Day, 12-3:30PM Ag Dynamics, Arkansaw, WI
- August 19** – UW-Arlington ARS Agronomy/Soils Field Day, 8AM, Arlington, WI
- August 20** – UWEX Langlade County Airport Field Day, Antigo, WI
- August 25-27** – Wisconsin Farm Tech. Days, Statz Bros., Inc. Farm, Sun Prairie, WI
- September 1** – UW-Arlington ARS Organic Agriculture Field Day, Arlington, WI

Amanda J. Gevens, Associate 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/>.

I can offer a preliminary look at our *University of Wisconsin Extension Disease & Insect Forecasting Network*. This work has been funded by the WI Specialty Crop Block Grant and supports a collaborative effort between the potato and vegetable extension programs of Drs. Amanda Gevens and Russ Groves. The link, <http://vdiffn.net/> will take you to our site which currently has potato late blight Blitecast and carrot foliar disease Tomcast tools available. Two weather data sets are utilized in generating these forecasts. The green dots indicate on-the-ground weather stations (not in production fields); Blitecast and weather data appear when you click on the dot. The colored/gridded map provides disease forecast/risk generated from the North American Meso-scale weather model (NAM 12km) from the National Weather Service; Blitecast and weather data appear when you click on any point/place on the map. This link will be fully operational for next year and will include a great number of diseases and insect pests. I will offer updates as we further develop this site.



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 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_2015.html

<i>Location</i>	Planting Date	50% Emergence	P-Day Cumulative	Disease Severity Value	Date of DSV Generation	Increase in DSV from 7/31
<i>Antigo</i>	Early 4/25	5/25	498	75	8/7	2
	Mid 5/5	6/1	498	75	8/7	2
	Late 5/15	6/15	401	49	8/7	2
<i>Grand Marsh</i>	Early 4/5	5/10	640	104	8/7	2
	Mid 4/15	5/15	630	103	8/7	2
	Late 5/1	5/21	596	101	8/7	2
<i>Hancock</i>	Early 4/10	5/15	602	84	8/7	1
	Mid 4/20	5/18	577	81	8/7	1
	Late 5/5	5/25	543	76	8/7	1
<i>Plover</i>	Early 4/15	5/20	643	95	8/7	2
	Mid 4/25	5/22	604	92	8/7	2
	Late 5/10	5/30	541	76	8/7	2

Potato Early Blight Preventive Management: P-Days have surpassed threshold of 300 in all potato plantings Wisconsin. Continued control of this disease is important to limit yield and quality losses. On May 8th, I provided a summary of fungicides for control of early blight in conventional potato in this newsletter, please find the link to this information below. <http://www.plantpath.wisc.edu/wivegdis/pdf/2015/May%208,%202015.pdf>

Late Blight Updates: Weather has varied around the state in the past week, but in general, conditions have not pushed advancement of late blight. With some rain in the forecast, along with cloudy days and more mild temperatures, it is important to stay alert for this disease and maintain a proactive protectant fungicide program.

In Wisconsin: Eight counties in Wisconsin have submitted samples which were confirmed for late blight in potato and/or tomato. While I don’t maintain a comprehensive list of how many fields are infected by county, the disease has been detected in several fields within each of the counties I have listed below. In all cases in which we have tested, the *Phytophthora infestans* is of the US-23 genotype. Reports are listed below. The US-23 genotype is sensitive to conventional phenylamide fungicides such as mefenoxam and metalaxyl (ie: Ridomil Gold SL). The use of antisporeulant fungicides (ie: Forum, Previcur Flex, AgriTin, Revus Top, Zampro, Ridomil) is critical following first detection of late blight in a field. In organic systems, copper containing fungicides continue to prove most effective and provide greatest broad spectrum

disease control in tomato and potato. EF-400 and BacStop (Anjon Ag) also provides control of late blight as seen in replicated open field trials in MI in recent years. While our previous lab and greenhouse investigations with Zonix indicated efficacy of the rhamnolipid for late blight control on tomato with a single inoculation, open field evaluations in PA and NC have not shown good control. Copper fungicides were, in most cases, 2X better at controlling late blight than the Zonix treatments (based on season-long disease or AUDPC).

Date of Confirmation	County (general location)	Host	Late blight pathogen genotype
23 June	Adams (northern)	Potato	US-23
8 July; 24 July; 29 July	Waushara (western)	Potato; Tomato	US-23
8 July; 28 July	Wood (southern, central)	Potato; Tomato	US-23
14 July	Marquette (central)	Potato	US-23
15 July; 28 July	Portage (central)	Potato	US-23
23 July	Columbia (north central)	Tomato	US-23
23 July	Fond du Lac (north central)	Tomato	US-23
4 August	Polk (southeastern)	Tomato	Not yet determined

Across the nation: There were new detections of late blight in NY this past week on tomato (US-23), as posted to www.usablight.org. To date, nationally, there have been confirmations of late blight in FL (US-23), CA (US-11), CT (US-23), ID (US-23), IN (US-23), NC (US-23), TX (not reported on usablight.org/strain not yet identified), WA (US-8), MD (US-23), ME (US-23), MI (US-23), NC, NJ (US-23), NY (US-23), ON and QC Canada, PA (US-23), VT, WI (US-23), and WV. See map below (blue counties are greater than 7 days old; red county indicates detection made in just the past 7 days). Screen shot grabbed at 4:30PM on 7 August, 2015.

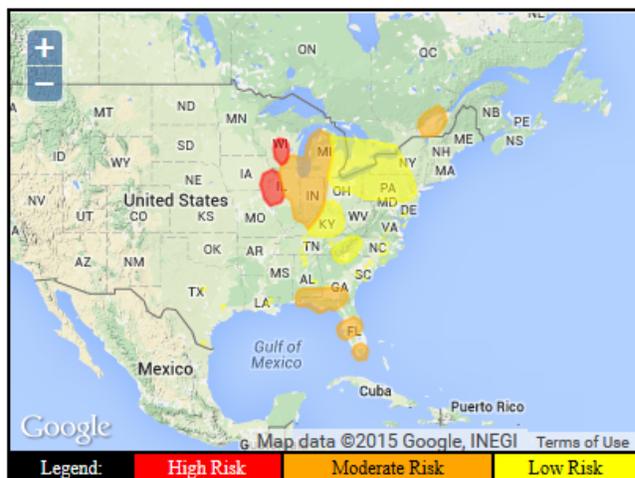


Fungicides are critical for protection of potato and tomato crops in organic and conventional systems at this time.

There is not one recommended fungicide program for all late blight susceptible potato (and tomato) fields in Wisconsin. Fungicide selections may vary based on type of inoculum introduction, proximity to infected fields, crop stage, late blight strain, and other diseases that may be in need of management. Please see UWEX Veg Crop Updates article on fungicide selections from June 5 at link below. Fungicides for organic systems and home garden fungicides can also be found at my website.

<http://www.plantpath.wisc.edu/wivegdis/pdf/2015/June%205,%202015.pdf> or a listing of 2015 WI potato late blight fungicides:

Risk prediction map for Day 3: Sunday, August 9



HIGH Risk for northwest IL, southeast IA, and southern WI.
Moderate Risk to cucurbits in central and southern FL, the FL panhandle, southern GA and AL, IN, eastern IL, southeast WI, western and central lower MI, and southern QC. Low Risk in eastern MI, southern ON, western NY, northern NJ, PA, northern and southwest OH, central and eastern KY, and western NC and SC. Minimal Risk to cucurbits otherwise.

Forecaster: TK at NCSU for the Cucurbit *ipmPIPE* - 2015

Fungicides are critical to maintain control of cucurbit downy mildew. Based on replicated research conducted by Dr. Mary Hausbeck of Michigan State University, a 7-day interval fungicide program is recommended for cucumber crops before disease is confirmed. The program should tighten up to a 5-day program after disease is confirmed. In other vine crops (cantaloupe, melon, zucchini, squash, pumpkin, and gourd), a 7 to 10 day program is recommended before disease, with a tightening up of the program to a 7-day interval after disease is confirmed. Fungicide selections should include Gavel 75WG (5 day PHI), Tanos 50WG (3 day PHI), Zampro 4.4SC (0 day PHI), Ranman 3.6SC (0 day PHI), and Zing! (0 day PHI). Previcur Flex 6SC (2 day PHI) and Presidio 4FL (2 day PHI) have also demonstrated efficacy in past years in trials. The previously listed fungicides should be alternated and tank-mixed with either mancozeb or chlorothalonil (unless one of these protectants is in a pre-mix formulation such as Zing! or Gavel).

Growers and researchers in the southeastern US, as well as in Michigan (in 2014 trials) have noted some resistance in the downy mildew pathogen population to Presidio and Previcur fungicides. As such, these fungicides should be tank-mixed with another downy mildew-specific fungicide as well as a base protectant of mancozeb or chlorothalonil. The cucurbit downy mildew that has been in MI over the past several years has also shown resistance to mefenoxam (ie: Ridomil), strobilurins (ie: Quadris, Cabrio), and mandipropamid (Revus). More information from Dr. Mary Hausbeck at Michigan State University on cucurbit downy mildew can be found at the link below.

http://msue.anr.msu.edu/news/cucumber_downy_mildew_makes_an_early_appearance_in_michigan?utm_source=Vegetable+-+MSU+Extension+News+-+06-23-15&utm_campaign=Vegetables+06-23-15&utm_medium=email



Hop Summer Field Day

(Designed for experienced growers)

Same Program – 2 locations:

Friday, August 14, 2015 1:00 – 4:30 pm
Davali Ridge – Dave Buss
N1926 County Highway II, Waterloo, WI

Saturday, August 15, 2015 – Noon – 3:30 pm
AgDynamics LLC - Luke Albers
N5988 County Rd N Arkansaw, WI

Program includes:

- **Dr. David Gent**, USDA - Oregon State University, Hop Disease and Production Specialist
- **Dr. Amanda Gevens**, UW-Extension Plant Pathologist
- **Dr. Russ Groves**, UW-Extension Entomologist
- **Michelle Marks**, WI SARE R&E Hop Research Project
- **WDATCP** - Facility requirement/license for hop processing
- Field tours of hop yard

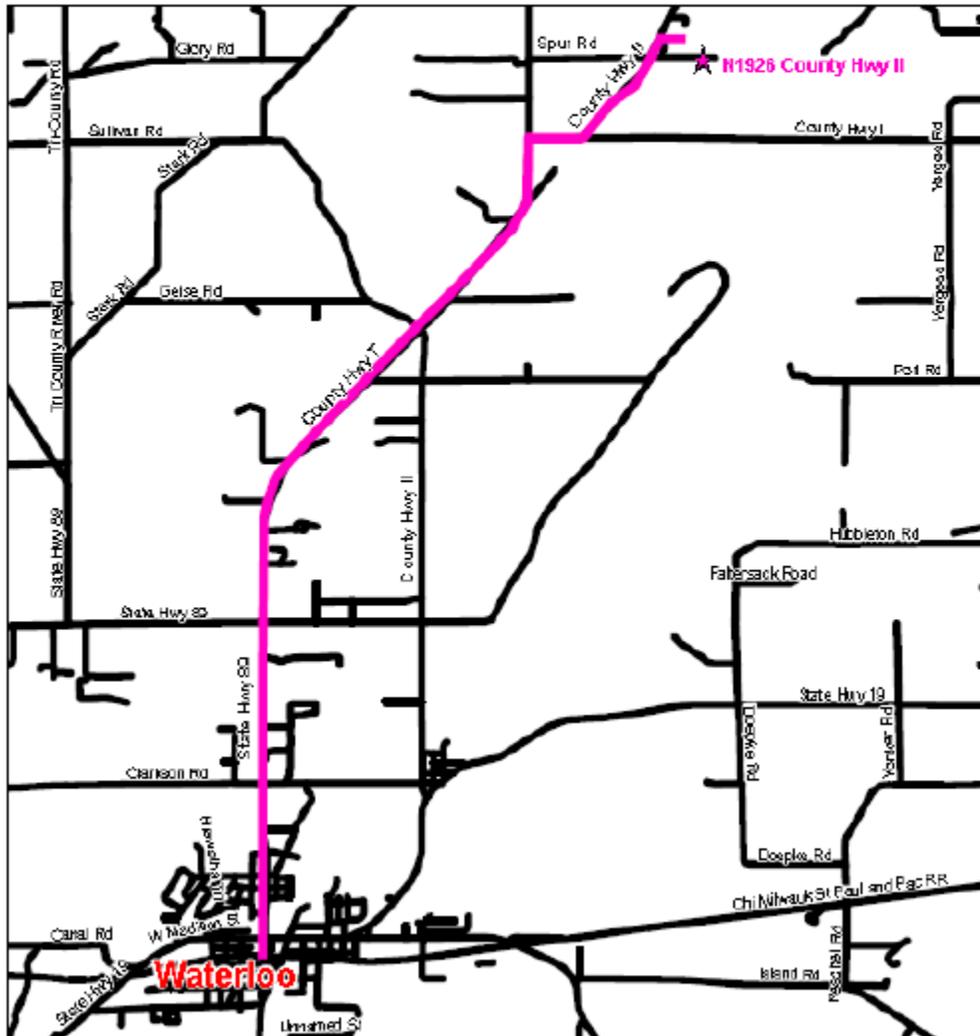
Cost is \$20 (cash or check) payable at the door.

Please register by August 7th to ensure adequate copies of materials. carl.duley@ces.uwex.edu or call 608-685-6256



An EEO/AA employer, University of Wisconsin Extension provides equal opportunities in employment and programming, including Title IX and American with Disabilities (ADA) requirements.

From Columbus: East on Hwy 16 & 60 3.2 miles. South on County Road (CR) TT 2.6 miles. South on CR II 3.3 miles to N1926 CR II.
From Waterloo: North on State Hwy 89 2.0 miles. Straight north on CR T 2.0 miles. Straight north on CR T & I 1.5 miles. East on CR I 0.3 miles. North on CR II 0.75 miles to N1926 CR II



Luke Albers – Ag Resource, Inc.

Go West on State Highway 10 out of Durand for about 4 miles to County Road N. Turn onto County Road N through Arkansaw turn into Ag Resource, Inc.





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August 10, 2015

Stephen Zimmerman, Interim Langlade Co. UW-Extension Agriculture Educator

Antigo Potato Research Field Day August 20

You are encouraged to join us at 1 p.m. on Thursday, August 20 for our annual field day at the Langlade County Agricultural Research Station. The station is located at the Langlade County Airport (corners of Hwy 64 and Hwy 52, just east of Antigo). The station is operated by UW-Extension with funding and support from the Wisconsin Potato Industry.

Topics on the tour this year will include:

Aphid Management Trial - Dr. Russ Groves.

Common Scab Trial (Product Evaluation Study) - Dr. Amanda Gevens.

WI Variety Trial - Dr. Felix Navarro.

Off-target Herbicides in Seed Potatoes: Research Update - Dr. Jed Colquhoun.

Breeding Program Update - Dr. Jeff Endelman.

Water Management Products - Bill Lindenmier, CPAg, Precision Laboratories.

APSA-80 Nutriplant – Ellie Womeldorf and Dan Taggatz

Following the tour we will meet at the City Park East shelter for food and refreshments provided by Servco FS. Questions can be directed to Steve Zimmerman at 715-627-6236.