



Vegetable Crop Update

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

No. 9– May 22, 2015

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Calendar of Events

July 15 – UW-Hancock ARS Field Day, 1:00PM, Hancock, WI
July 17 – Rhinelander State Farm Field Day, Lelah Starks Elite Found. Seed Farm, Rhinelander, WI
August 20 – UWEX Langlade County Airport Field Day, Antigo, WI
August 25-27 – Wisconsin Farm Technology Days, Statz Bros., Inc. Farm, Sun Prairie, WI

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Late blight updates: Nationally, in the past week, there were no new diagnoses reported at www.usablight.org. So far in 2015, there have been confirmations of late blight (US-23) in FL, CA (US-11), and TX (not reported on usablight.org/strain not yet identified).

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

Location	Planting Date	50% Emergence	P-Day Cumulative	Disease Severity Value	Date of DSV Generation	Increase in DSV from last week
<i>Antigo</i>	Early 4/25	NA	NA	NA	NA	NA
	Mid 5/5	NA	NA	NA	NA	NA
	Late 5/15	NA	NA	NA	NA	NA
<i>Grand Marsh</i>	Early 4/5	5/10	50	3	5/22	0
	Mid 4/15	5/15	40	2	5/22	0
	Late 5/1	NA	NA	NA	NA	NA
<i>Hancock</i>	Early 4/10	5/15	40	3	5/22	0
	Mid 4/20	5/18	15	0	5/22	0
	Late 5/5	NA	NA	NA	NA	NA
<i>Plover</i>	Early 4/15	5/15	40	3	5/22	0
	Mid 4/25	5/22	NA	NA	NA	NA
	Late 5/10	NA	NA	NA	NA	NA

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>.

Disease Forecasting: What are DSVs and P-days?: Locations of in-field weather stations/disease forecasts include: Antigo, Plover, Hancock, and Grand Marsh. **Blitecast (late blight forecasting):** Computation of 18 disease severity values (DSVs) relies on maximum and minimum temperatures each day, the duration of relative humidity periods above 90% and the maximum/minimum temperatures during the relative humidity periods above 90%. For a given day, up to 4 DSVs can accumulate. We start the severity value calculations at approximately 50% crop emergence. When we reach a total of 18 severity values, we issue a warning which indicates that environmental conditions have been met which favor late blight. At 18 DSVs, the recommendation for preventive applications of effective late blight fungicides is made. An additional alert is issued when the first symptoms of late blight appear anywhere in the state. The determination of late blight management recommendations is made by taking into consideration DSVs, projected weather forecast, and presence/risk of inoculum. This information is published in our newsletter and will be disseminated in various other outlets as the season progresses. *The DSVs and PDays for the “Mid-planted” dates on the 18 May report were calculated based on the “Early-planted” emergence dates. We have adjusted emergence dates for today’s report and will keep this date consistent from this time onward.*

Last year, we began offering an additional late blight forecasting tool which applies the same Blitecast concepts (described above) to weather sourced from additional stations and forecasted weather (NOAA). This information will be offered with fluid updates at the UW-Vegetable Pathology website in 2015 (hopefully by next week!) – and in static form in the once-a-week issue of the UW-Vegetable Crop Updates newsletter. This tool utilizes weather data from a state-wide (and national) network of information, rather than from in-field weather stations. Maps generated from this forecasting approach can be very useful in quickly identifying regional patterns of increasing disease risk – and can aid in planning of preventative fungicide applications should forecasted weather turn inclement.

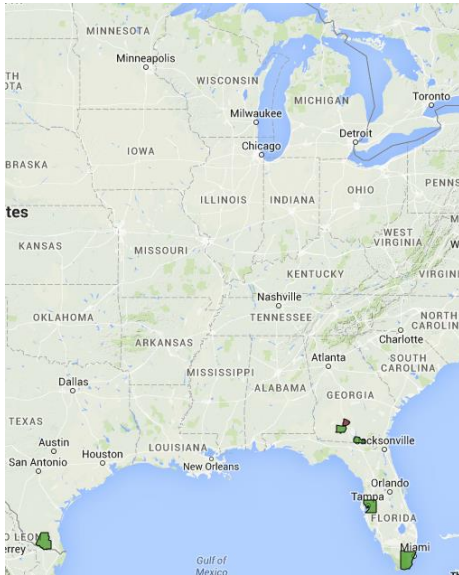
Cornell University has been developing an enhanced late blight forecasting tool that also offers a Blitecast for forecasted weather. Dr. Bill Fry and his research group have been integrating additional parameters in the forecasting tool which modify the spray recommendation based on varietal resistance and previous fungicide applications (and likely residues). Here in WI, we are working with this tool for potato late blight management in comparison to our in-field forecasting and current management approaches. For more information on Cornell’s Late Blight Decision Support System (DSS) tool, please refer to link below.

<http://newa.cornell.edu/index.php?page=potato-late-blight-dss>

The Potato P-Day accumulator is based on potato physiological development (‘Russet Burbank’) and accumulated weather conditions to generate early blight recommendations. Once we reach 300 P-Days, calculated from emergence onward, our spray recommendations take both the P-Day and severity value totals into account to generate 5 day, 7 day or 10 day spray interval recommendations. The interval is variable depending on prevailing weather conditions and the

presence of disease in the area. Typically, P-Day 300 is reached in early July and when potato rows are just beginning to touch (row closure).

Cucurbit downy mildew updates: There was one new report of cucurbit downy mildew in the US in the past week in Tift County, Georgia on cantaloupe. Earlier this season, locations in TX, GA, and FL also confirmed cucurbit downy mildew. The website: <http://cdm.ipmpipe.org/> offers up to date reports of cucurbit downy mildew and disease forecasting information. I will continue to include the pertinent updates and risks in this newsletter throughout the production season.



Green counties indicate locations of older reports (>7 days ago); red county indicates location of newer report (≤7 days ago) of cucurbit downy mildew in the U.S. in 2015. Map sourced from <http://cdm.ipmpipe.org/> from 10:29AM May 22, 2015.

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