



Vegetable Crop Update

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

Disease Supplement No. 1 – June 24, 2014

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: Recent weather patterns have been providing Wisconsin with conditions that are favorable to the development of late blight. This Disease Supplement is intended to provide growers and consultants with some additional weather-based information to aid in management. Recall, our late blight forecasting tools assume presence of the pathogen when indicating risk threshold. However, I am not aware of any active late blight in Wisconsin at this time, nor have I addressed any seed potato concerns pertaining to late blight this winter in storage or during cutting/planting this spring.



Nationally, in the past few weeks, there were two potato late blight reports from Carteret County NC and Suffolk County Long Island, NY.

Genotype/strain has not yet been characterized. Details can be found at <http://www.usablight.org/>. So far in 2014, several FL counties have reported late blight caused by genotype US-23 in tomato and potato, and single counties in NC and NY have reported late blight on potato. The website provides location (by county) of positive reports of late blight in the U.S. and further information on disease characteristics and management.

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
<i>Antigo</i>	Early 5/20	6/9	126	15	6/24
	Mid 5/27	6/16	78	15	6/24
	Late 6/6	NA	NA	NA	NA
<i>Grand Marsh</i>	Early 4/20	5/19	282	46*	6/24
	Mid 5/4	6/1	194	41*	6/24
	Late 6/3	6/23	18	3	6/24
<i>Hancock</i>	Early 4/24	5/20	298	22*	6/24
	Mid 5/8	6/2	199	18*	6/24
	Late 6/3	6/24	10	0	6/24
<i>Plover</i>	Early 4/21	5/20	270	33	6/24
	Mid 5/5	6/1	186	30	6/24
	Late 6/5	6/24	9	0	6/24

Please note that we have surpassed the threshold for DSVs (18) in the Grand Marsh, Hancock, and Plover areas for early and mid-planted potatoes. This indicates that temperature and humidity have been favorable for the promotion of late blight. 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. Early 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. For further information on specific fungicide rates and activities, please find the 2014 updated list of potato fungicides for WI at the link below.

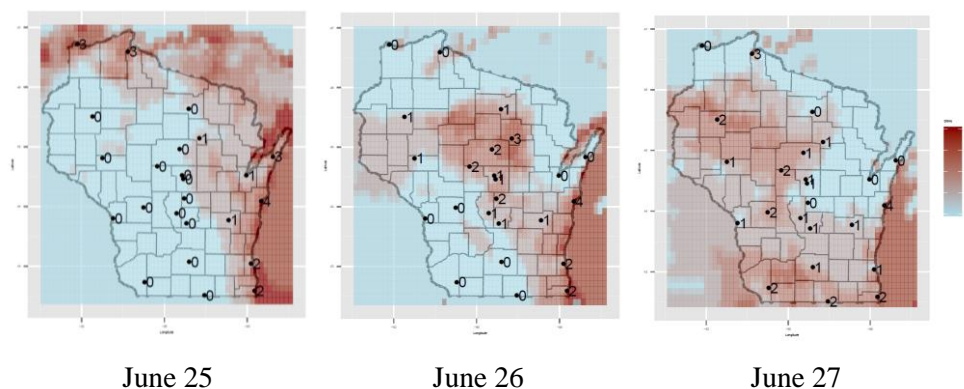
<http://www.plantpath.wisc.edu/wivegdis/pdf/2014/June%206%202014.pdf>

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 just under the 300 threshold for early planted potatoes in the Grand Marsh (282), Hancock (298), and Plover (270) areas. I expect that we will reach and surpass the threshold of 300 within 1-4 days at these 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 just starting to develop in lower canopies of earliest planted potatoes in southern Wisconsin.

Late blight risk predictions based on forecasted weather for WI (K.E. Frost, UW-Plant Pathology):

Maps below depict DSV accumulations from forecasted weather data (NOAA). Based on forecasted weather, DSV accumulations will be none to minimal in the next 24 hours, with moderate accumulations in 48 to 72 hours. Blue tone indicates no accumulation; pink tones indicate accumulation of 1-3; red tone indicates maximum accumulation of 4 DSVs on the given day. Emergence dates do not drive the accumulations in this set of graphs. The graphs are depicting DSVs for a single 24-hour period by location. We are working to set up our UW-Veg Pathology site to post the 2014 forecasted values as offered in 2013.



Blitecast – DSV accumulations as of 6/23/2014 for Wisconsin generated from NOAA weather data (K.E. Frost, UW-Plant Pathology): Maps below depict DSV accumulations from actual NOAA weather data (weather stations not in potato fields). The series of maps below is organized by location and emergence date. For example, the first column depicts Grand Marsh accumulated DSVs, second column Hancock, etc... The top row depicts early emerged crop accumulations, middle row depicts mid-emerged accumulations, and bottom row depicts late emerged accumulations. Green tones indicate no (0) to low (5) DSV accumulation from emergence date; yellow to orange tones indicate moderate (6-10) DSV accumulation; red tones indicate high to threshold (18) DSV accumulation. Actual emergence dates drive the accumulations in this set of graphs.

