



Vegetable Crop Update

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

No. 8 – June 2, 2018

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Calendar of Events

July 10-12, 2018 – Farm Technology Days, Sternweis & Weber's Farms, Marshfield, WI

July 19, 2018 – UW-Hancock Agricultural Research Station Field Day, Hancock, WI

July 26, 2018 – UWEX Langlade County Field Day & Potato Virus Y Detection Training Workshop, Antigo, WI

August 2, 2018 – UW-Rhineland Field Day, Rhineland Agricultural Research Station, WI

November 27-29, 2018 – Processing Crops Conference & MWFPA Annual Convention, Wisconsin Dells, WI

January 15-17, 2019 – Wisconsin Agribusiness Classic, Alliant Energy Center, Madison, WI

January 27-29, 2019 – Wisconsin Fresh Fruit & Vegetable Conference, Kalahari Conference Center, Wisconsin Dells, WI

February 5-7, 2019 – UWEX & WPVGA Grower Education Conference, Stevens Point, WI

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Late blight look-alikes in southern US: Dr. Jean Ristaino, Professor at North Carolina State University with emphasis in research on *Phytophthora infestans*, provided a report on a late blight look-alike from tomato and potato in NC. The southeastern US has been experiencing very high precipitation levels over the past week or so. Growers are having “big problems with *P. nicotianae* this season in eastern NC on potatoes. It has also now shown up in western NC on tomato.” Dr. Ristaino confirmed the presence of the pathogen by PCR and ITS sequencing – and both pathogen mating types have been identified (the pathogen has an A1/A2 mating type structure like that of the late blight pathogen). As pictures show, below, the lesions look a lot like late blight with disease on foliage.



(Photo Courtesy: Dr. Jean Ristaino, NCSU)

P. nicotianae on potato is not new, but is rather sporadic in occurrence on potato. The pathogen can cause both foliar and tuber disease on potato. Foliar symptoms look like late blight, but without the signature

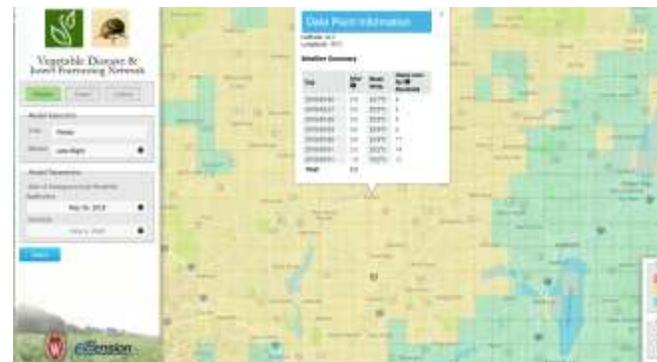
white pathogen sporulation; tuber symptoms look like pink rot and result in a softer rot, unlike lesions caused by late blight. More information on this disease can be found in a report by Dr. Meg McGrath of Cornell University, link below.

<http://blogs.cornell.edu/livepath/gallery/potatoes/leaf-spot-caused-by-phytophthora-nicotianae/>

National Late Blight Updates: <http://usablight.org> is again up and running for 2018. **No new cases detected in over one month.** In all cases reported to the usablight website, the pathogen genotype was US-23. This has been the predominant genotype in Wisconsin, and across the U.S., in recent years. US-23 can still generally be managed well with use of phenylamide fungicides such as mefenoxam and metalaxyl (ie: Ridomil). However, a potato sample from northeastern FL was sent to my lab earlier this spring and was the US-8 genotype. This information does pose some additional concern for management as US-8 cannot be managed with phenylamide fungicides as isolates are resistant to the fungicide.

Current Wisconsin Late Blight Risk (Severity Value Accumulations) from <https://agweather.cals.wisc.edu/vdifn/maps>. We have not yet reached thresholds for late blight management response triggers. 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.** Our in-field weather stations are in place and we will be providing data for P-Days and DSVs from the field stations in upcoming newsletters and at the UW-Potato and Vegetable Pathology Website. We needed to install new modems on the stations this year which has delayed our in-field data generation. Apologies for any inconvenience. I felt it was important to generate these values in lieu of in-field-based values as our weather has generally been disease-favorable and crops are advancing rapidly. Values below are generated from weather data sourced from NOAA. We have previously introduced this tool and more information is available here: [Veg Crop Updates 2015 VDIFN introduction](#)

<i>Location</i>	Planting Date	50% Emergence	Disease Severity Value	Date of DSV Generation
<i>Antigo</i>	Early 5/15	-	-	-
	Mid 5/25	-	-	-
	Late 6/5	-	-	-
<i>Grand Marsh</i>	Early 5/1	5/15	10	6/2
	Mid 5/15	-	-	-
	Late 6/1	-	-	-
<i>Hancock</i>	Early 5/2	5/16	7	6/2
	Mid 5/17	-	-	-
	Late 6/1	-	-	-
<i>Plover</i>	Early 5/7	5/18	8	6/2
	Mid 5/20	-	-	-
	Late 6/2	-	-	-



2018 Listing for Fungicides for Potato Late Blight has been updated. No significant changes from 2017 – however I did update details regarding Syngenta’s Orondis. Most formulations of this relatively new fungicide are now available in pre-mixes, no longer as co-packs. Updated listing will be available at the Potato & Vegetable Pathology website as well as by link in this newsletter in upcoming editions.

Cucurbit downy mildew reporting and forecasting site <http://cdm.ipmpipe.org/> is again providing useful information to growers interested in tracking this potentially crop-devastating disease. In recent years, we have seen few cucumber fields with downy mildew, but when the pathogen comes to the state,

the disease can reduce yield and quality substantially. The site documented confirmations of downy mildew in two counties in NC on cucumber this past week.



The 2018 A3422 Commercial Vegetable Production in Wisconsin Guide is now available for 2018. As in past years, the guide can be downloaded for free (link below) or a hard copy can be purchased from UWEX Learning Store for \$10. <http://learningstore.uwex.edu/assets/pdfs/A3422.PDF>

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At the Hancock Ag Research Station, as of today, emergence of common varieties that are planted on May 1st are:

Russet Burbank	84%
Russet Norkotah	84%
Silverton	88%
Snowden	95%
Lamoka	40%

Plants range from cracking to about 4'' tall (Figure 1). It is expected that full emergence will be achieved within the next 10 days. Soil moisture of our field at HARS is at field capacity after the 0.8'' of rain on Wednesday. With the forecasted warm weather next week and the plants' fast growing, regular irrigation will be needed soon. This past week on average, daily potential ET is about 0.22'', and so adjusted ET is about 0.13'' for potatoes (with about 35% crop cover) in central Wisconsin.



Figure 1. Potato plant emergence at Hancock (photo taken on June 1st, 2018)

This summer on our VRI-deficit irrigation trial, we will collaborate with the newly arrived soil physicist Dr. Jingyi Huang (with Department of Soil Science at UW-Madison) and work on use of Dualem-21S, a non-invasive sensor to measure soil Electrical Conductivity (EC) from top soil to as deep as 10'. The objective of using the sensor is, to model the soil moisture status based on EC measurements of a big area, with a non-invasive instrument that can be either mounted onto a tractor or carried by a person. So without installing thousands of soil moisture probes, we will be able to get a good estimation of soil moisture status at different soil depths of an entire field at any growing stage of the plants. Stay tuned.