Vegetable Crop Update

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

Extension UNIVERSITY OF WISCONSIN-MADISON

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Calendar of Events:

November 28-30, 2023 – Midwest Food Producers Assoc. Processing Crops Conference, Kalahari Convention Center
January 9-11, 2024 – Wisconsin Agribusiness Classic, Alliant Energy Center, Madison, WI
January 21-23, 2024 – Wisconsin Fresh Fruit and Vegetable Growers Conference, Kalahari Resort, Wisconsin Dells, WI
January 25-26, 2024 – Organic Vegetable Production Conference, UW Madison Division of Extension (Online)
February 2-3, 2024 – Organic Vegetable Production Conference, UW Madison Division of Extension, Alliant Energy Center, Madison, WI
February 6-8, 2024 – UW-Madison Div. of Extension & WPVGA Grower Education Conference & Industry Show, Stevens Point, WI

Amanda Gevens, Chair, Professor & Extension Vegetable Pathologist, UW-Madison, Dept. of Plant Pathology, 608-575-3029, Email: gevens@wisc.edu, Lab Website: https://vegpath.plantpath.wisc.edu/

Early blight of potato/tomato. Accumulations of P-days this past week were between 46-56 across the state of Wisconsin. In all locations and all planting dates, potato fields have surpassed the threshold and should continue to receive fungicide applications for early blight management depending upon the time-to-harvest of the field

Late blight of potato/tomato. Accumulations of Blitecast DSVs were extremely low with a range of 0-1 this past week in the 7 sites detailed in our table, below. In my past 14 years with UW-Madison, we have not seen such a low accumulation of DSVs during the production season! If we make it through the next few weeks, we'll have a second year with no reported late blight on tomato and potato in Wisconsin! The usablight.org website (https://usablight.org/map/) indicates no new late blight reports in the past week. So far, all characterizations of the late blight pathogen identified in North America this growing season have resulted in the US-23 type. Fungicides for the management of late blight in tomato and potato crops are provided: https://learningstore.extension.wisc.edu/products/commercial-vegetable-production-in-wisconsin. A specific list of fungicides for potato late blight in Wisconsin was also offered in a special report shared via email on July 28. https://vegpath.plantpath.wisc.edu/wp-content/uploads/sites/210/2023/08/2023-Potato-Late-Blight-Fungicides.pdf

Current P-Day (Early Blight) and Disease Severity Value (Late Blight) Accumulations. Many thanks to Ben Bradford, UW-Madison Entomology; Stephen Jordan, UW-Madison Plant Pathology; and our grower collaborator weather station hosts for supporting this disease management effort again in 2023. A Potato Physiological Day or P-Day value of ≥300 indicates the threshold for early blight risk and triggers preventative fungicide application. A Disease Severity Value or DSV of ≥18 indicates the threshold for late blight risk and triggers preventative fungicide application. Red text in table indicates threshold has been met or surpassed. Weather data used in these calculations is from weather stations that are placed in potato fields in each of the four locations, as available. Data from an alternative modeling source: https://agweather.cals.wisc.edu/vdifn will be used to supplement as needed for missing data points and for additional locations (indicated with *). Data are available in graphical and raw formats for multiple locations at: https://vegpath.plantpath.wisc.edu/dsv/.

	Planting Date		50% Emergence Date	Disease Severity Values (DSVs) *through 9/9/2023*	Potato Physiological Days (P-Days) *through 9/9/2023*
Spring Green*	**Early**	Apr 3	May 9	12	**968**
	Mid	Apr 17	May 12	12	**946**
	Late	May 10	May 23	12	**877**
Arlington*	**Early**	Apr 5	May 10	11	**978**
	Mid	Apr 20	May 15	11	**940**
	Late	May12	May 25	11	**880**
Grand Marsh	**Early**	Apr 5	May 10	13	**933**
	Mid	Apr 20	May 15	13	**899**
	Late	May 12	May 25	13	**847**
Hancock	**Early**	Apr 10	May 17	13	**903**
	Mid	Apr 22	May 19	13	**898**
	Late	May 14	May 28	13	**848**
Plover	**Early**	Apr 14	May 19	16	**890**
	Mid	Apr 24	May 20	16	**885**
	Late	May 19	May 29	16	**836**
Antigo	**Early**	May 1	May 28	14	**796**
	Mid	May 15	June 3	14	**752**
	Late	June 7	June 23	14	**621**
Rhinelander*	**Early**	May 7	June 1	9	**763**
	Mid	May 18	June 5	9	**728**
	Late	June 9	June 24	9	**605**

In addition to the potato field weather stations, we have the UW Vegetable Disease and Insect Forecasting Network tool to explore P-Days and DSVs across the state (https://agweather.cals.wisc.edu/vdifn). This tool utilizes NOAA weather data. In using this tool, be sure to enter your model selections and parameters, then hit the blue submit button at the bottom of the parameter boxes. Once thresholds are met for risk of early blight and/or late blight, fungicides are recommended for optimum disease control. Fungicide details can be found in the 2023 Commercial Vegetable Production in Wisconsin Guide, Extension Document A3422. https://learningstore.extension.wisc.edu/products/commercial-vegetable-production-in-wisconsin

Cucurbit Downy Mildew. The Cucurbit Downy Mildew forecasting webpage (https://cdm.ipmpipe.org/) is not forecasting the movement of the pathogen, but the group is offering reporting of findings of cucurbit downy mildew from the US (see current map below showing just a single red county with a new report from PA). **To date, there have been no reports of downy mildew here in WI**. We should be considering preventative treatment of cucumber and melon crops here due to the likelihood of the disease resulting from clade 2 downy mildew. https://vegpath.plantpath.wisc.edu/2023/08/28/update-15-aug-27-2023/