Vegetable Crop Updates

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

Extension
UNIVERSITY OF WISCONSIN-MADISON

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- Disease forecasting updates for potato early blight and late blight
- Damping-off diseases of vegetables
- Cucurbit downy mildew updates

Calendar of Events:

July 10, 2025 – UW Hancock Agricultural Research Station Field Day
December 2-4, 2025 – Midwest Food Producers Assoc. Processing Crops Conference, Kalahari Convention Center
January 12-13, 2026 – Wisconsin Agribusiness Classic, Kalahari Convention Center
February 3-5, 2026 – UW-Madison Div. of Extension & WPVGA Grower Education Conference & Industry Show, Stevens Point, WI

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Current P-Day (Early Blight) and Disease Severity Value (Late Blight) Accumulations will be posted at our website and available in the weekly newsletters. Thanks to Ben Bradford, UW-Madison Entomology for supporting this effort and providing a summary reference table: https://agweather.cals.wisc.edu/thermal-models/potato. 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. Data from the modeling source: https://agweather.cals.wisc.edu/vdifn are used to generate these risk values in the table below. I've estimated early, mid-, and late planting dates by region based on communications with stakeholders. These are intended to help in determining optimum times for preventative fungicide applications to limit early and late blight in Wisconsin.

	Planting Date		50% Emergence Date	Disease Severity Values (DSVs) *through 5/17/2025*	Potato Physiological Days (P-Days) *through 5/17/2025*
Spring Green	**Early**	Apr 5	May 10	0	59
	Mid	Apr 18	May 14	0	31
	Late	May 12	May 26	0	TBD
Arlington	**Early**	Apr 5	May 10	0	60
	Mid	Apr 20	May 15	0	23
	Late	May 10	May 24	0	TBD
Grand Marsh	**Early**	Apr 7	May 11	0	50
	Mid	Apr 17	May 14	0	30
	Late	May 12	May 27	0	TBD
Hancock	**Early**	Apr 10	May 15	0	21
	Mid	Apr 22	May 21	0	4
	Late	May 14	June 2	0	TBD
Plover	**Early**	Apr 14	May 18	0	5
	Mid	Apr 24	May 22	TBD	TBD

	Late	May 19	June 7	TBD	TBD
Antigo	**Early**	May 1	May 24	TBD	TBD
	Mid	May 15	June 1	TBD	TBD
	Late	June 1	June 15	TBD	TBD
Rhinelander	**Early**	May 7	May 25	TBD	TBD
	Mid	May 18	June 8	TBD	TBD
	Late	June 2	June 16	TBD	TBD

Late blight of potato/tomato. The usablight.org website (https://usablight.org/map/) indicates a US-23 late blight strain type confirmation in Collier County FL in 2025. The site is not comprehensive. This genotype/clonal lineage is generally still responsive to phenylamide fungicides meaning that Ridomil and Metastar fungicides (mefenoxam and metalaxyl) can still effectively control late blight caused by these strain types. We accumulated just 0 Blitecast Disease Severity Values over the past week in WI.

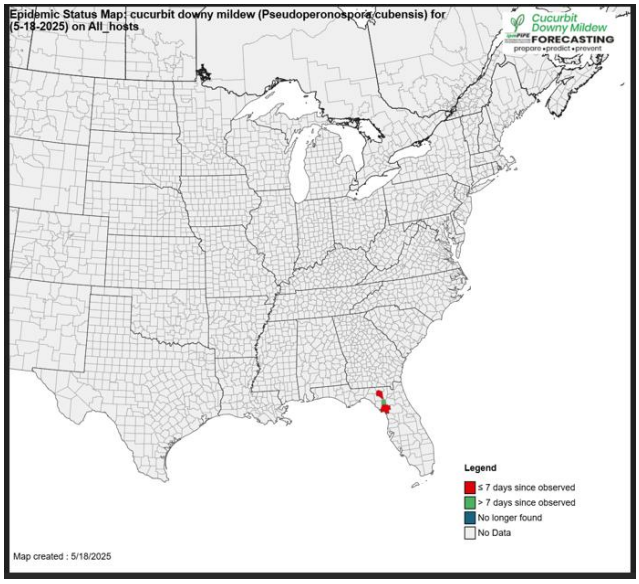
Early blight of potato. We are beginning to accumulate P-Days in potatoes at 50% emergence. P-Day values will continue to amass (up to ~10 per day) and develop conditions optimum for early blight disease caused by *Alternaria solani*. Earliest inoculum typically comes from within a field and from nearby fields. Once established, early blight continues to create new infections due to its polycyclic nature – meaning spores create foliar infection and the resulting lesion on the plant can then produce new spores for ongoing new infections in the field and beyond. Early season management of early blight in potato can mitigate the disease for the rest of the season.
https://vegpath.plantpath.wisc.edu/diseases/potato-early-blight/

Fungicides can provide good control of early blight in vegetables when applied early on in infection. Multiple applications of fungicide are often necessary to sustain disease management to time of harvest due to the typically high abundance of inoculum and susceptibility of most common cultivars. For Wisconsin-specific fungicide information, refer to the Commercial Vegetable Production in Wisconsin (A3422), a guide available through the UW Extension Learning Store website which is annually updated. Or, for home garden fungicide recommendations, see Home Vegetable Garden Fungicides (D0062), a fact sheet available through the UW Plant Disease Diagnostic Clinic website. Always follow label directions carefully.

For custom values, please explore the UW Vegetable Disease and Insect Forecasting Network tool for 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 2025 Commercial Veg. Production in WI Extension Document A3422:
https://cropsandsoils.extension.wisc.edu/articles/2025-commercial-vegetable-production-in-wisconsin-a3422/

Cucurbit Downy Mildew: I will continue to track cucurbit downy mildew in the US and report via this newsletter. This information helps us understand the potential timing of arrival of the pathogen in our region, as well as the strain type which can give us information about likely cucurbit hosts in WI – as well as best management strategies. During this past week, downy mildew was confirmed on cucurbits (cucumber and watermelon) in Florida. Clade 1 downy mildew strains infect watermelon and Clade 2

strains infect cucumber. I will be hosting a cucurbit downy mildew sentinel plot at the UW Hancock Agricultural Research Station this summer. This 'sentinel plot' is a non-fungicide treated collection of cucurbit plants which are observed weekly for disease symptoms. I will report the presence/absence of downy mildew from this plot in this newsletter throughout the growing season. Additionally, I keep an eye on the downy mildew spore trapping work of Dr. Mary Hausbeck at Michigan State University and include this information as relevant to WI https://veggies.msu.edu/downy-mildew-news/ . At this time, no spores reported from the MI traps.



Cucumber and watermelon downy mildew have been confirmed in Florida over this past week. Green counties indicate a former report of the disease greater than 7 days ago. From: https://cdm.ipmpipe.org/

For more information and management: https://vegpath.plantpath.wisc.edu/2022/07/03/update-10-july-3-2022/ and https://hort.extension.wisc.edu/articles/cucurbit-downy-mildew-identification-and-management/#:~:text=on%20this%20site.-,Wisconsin%20Horticulture,been%20found%20primarily%20on%20cucumber.

Vegetable Damping-Off Disease. (credit to Dr. Brian Hudelson, Director of the UW Plant Disease Diagnostic Clinic for components of this article) Damping-off is a common disease that impacts all types of plant seedlings. The disease is favored under conditions of cool and wet soils. Seedlings are susceptible for a relatively short period of time following emergence. As plants age, their susceptibility to damping-off declines. The symptoms develop at or just below the soil line resulting in lower stem collapse or girdling. The seedling subsequently die. Damping-off is caused by multiple soil-borne pathogens including water molds (oomycetes) such as *Pythium* species and fungi such as *Rhizoctonia solani* and *Fusarium* species. These pathogens readily survive in and are moved in the soil or on soil-contaminated items such as pots, tools, and workbenches. Prevention of damping-off is critical since plants with damping-off cannot be saved.

When planting seeds, make sure that work areas, tools and pots are pathogen-free. Decontaminate tools and workbenches by treating them for at least 30 seconds with 10% bleach or (preferably due to its less corrosive properties) 70% alcohol (e.g., rubbing alcohol or certain spray disinfectants). Decontaminate pots by washing them with soapy water to remove bits of old soil, soaking them for at least 20 minutes in 10% bleach, and then rinsing them thoroughly to remove bleach residues. DO NOT reuse plastic pots if you have had problems with damping-off or root rots (see UW Plant Disease Facts D0095, *Root Rots in the Garden*, for details) in the past, as they are difficult to decontaminate.

When planting, use a well-drained, pasteurized potting mixture. DO NOT use garden soils as they often contain damping-off pathogens. DO NOT plant seeds too deeply, and germinate seeds at high temperatures, so that seedlings rapidly grow out of the stage where they are susceptible to damping-off. DO NOT overwater as damping-off organisms are more active in wet soils. If the techniques described above do not work, then consider using fungicide-treated seed. In particular, plants grown from captan-treated seeds tend to have fewer problems with damping-off. **For more information on damping-off:** Contact the University of Wisconsin Plant Disease Diagnostics Clinic (PDDC) at 608-262-2863 or pddc@wisc.edu.

Picture **of cabbage damping-off symptoms** from University of Minnesota Extension. https://apps.extension.umn.edu/garden/diagnose/plant/vegetable/cabbage/seedlingcollapsed.html

More information from University of Wisconsin Extension: https://hort.extension.wisc.edu/articles/damping/