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

September 6, 2026

In This Issue:

- Potato Early and Late Blight Disease Risk Modelling and Management
- Cucurbit Downy Mildew Updates
- Potato Pythium Leak Symptoms & Management

Calendar of Events:

August 25, 2026 – UW Extension Potato Groundwater Quality Field Day, 10AM to Noon, 3429 CR Y Custer, WI

September 2, 2026 – UW Extension Crop Rotation for Cleaner Water and Soil Health Field Day, 10AM to Noon, 6445 US-14, Arena, WI

December 1-3, 2026 – Midwest Food Products Association Annual Convention & Expo, Processing Crops Conference, Wisconsin Dells, WI

February 9-11, 2027 – WPVGA/UWEX Grower Education Conference, Stevens Point, WI

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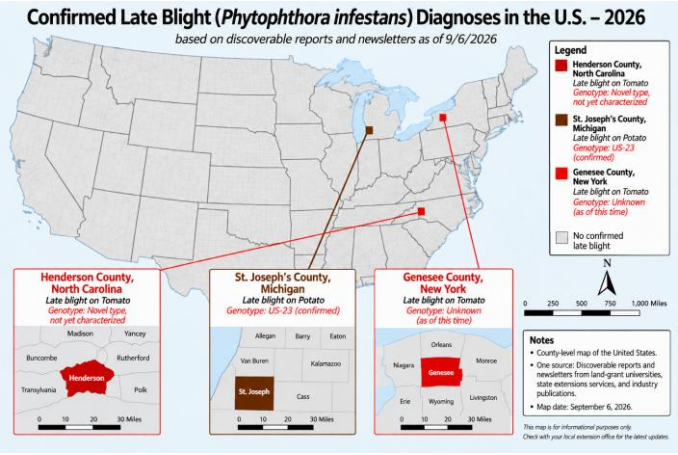
Current P-Day (Early Blight) and Disease Severity Value (Late Blight) Accumulations will be posted at our website and available in the weekly newsletters. Thanks to Ben Bradford, UW- Madison Entomology for supporting this effort and providing a summary table: https://agweather.cals.wisc.edu/thermal-models/potato. A Potato Physiological Day or P-Day value of ≥300 indicates the threshold for early blight risk in potato and triggers preventative fungicides. A Disease Severity Value or DSV of ≥18 indicates the threshold for late blight risk and triggers preventative fungicide application in potato. Data from the modeling source: https://agweather.cals.wisc.edu/vdifn are used to generate these risk values. 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.

Location	**Planting Date**		**50% Emergence Date**	**Disease Severity Values (DSVs) *through 9/5/26*** ***Season total (additional DSVs over past week)***	**Potato Physiological Days (P-Days) *through 9/5/26*** ***Season total (additional P-Days over past week)***
Spring Green	Early	Apr 10	May 7	**67** (11)	**978** (58)
	Mid	May 5	May 20	**65** (11)	**906** (58)
	Late	May 16	June 2	**65** (11)	**810** (58)
Arlington	Early	Apr 12	May 8	**40** (10)	**981** (60)
	Mid	May 6	May 23	**40** (10)	**906** (60)
	Late	May 20	June 4	**40** (10)	**809** (60)
Grand Marsh	Early	Apr 13	May 9	**60** (9)	**949** (61)
	Mid	May 6	May 22	**60** (9)	**889** (60)
	Late	May 21	June 5	**60** (9)	**784** (60)
Hancock	Early	Apr 14	May 11	**41** (9)	**944** (62)
	Mid	May 10	May 30	**40** (9)	**829** (61)
	Late	May 23	June 6	**39** (9)	**775** (61)
Plover	Early	Apr 15	May 12	**34** (7)	**942** (60)
	Mid	May 10	May 30	**33** (7)	**831** (59)
	Late	May 25	June 6	**32** (7)	**779** (61)

Antigo	Early	May 12	May 29	**51** (17)	**808** (73)
	Mid	May 25	June 5	**59** (18)	**765** (75)
	Late	June 8	June 20	**48** (18)	**653** (75)
Rhinelander	Early	May 15	June 6	**34** (11)	**736** (65)
	Mid	May 28	June 10	**32** (11)	**699** (65)
	Late	June 9	June 25	**27** (12)	**603** (65)

Late blight of potato/tomato. Wisconsin potato production regions have accumulated moderate to high 7-18 Disease Severity Values or DSVs over this past week. All locations are at or surpassing the action threshold of 18. Fields with ≥18 DSVs should receive preventative fungicide applications to manage for late blight. A current list of fungicides for management of potato late blight in Wisconsin 2026 is provided here: https://vegpath.plantpath.wisc.edu/resources/late-blight-fungicides/.



Late blight in the US 2026. Late blight was confirmed on tomato in western NY (Genesee County) this past week. Earlier this season, isolated confirmations came from tomato in NC, and potato in MI. The NC late blight strain is not one of the known types (scientists had anticipated US-23, but this was not the case). The NY late blight hasn't yet been typed as far as I know. The late blight founds on potatoes in FL back in January was also of a novel type – not the anticipated US-23. This is an interesting time, requiring ongoing support for late blight management and vigilance.

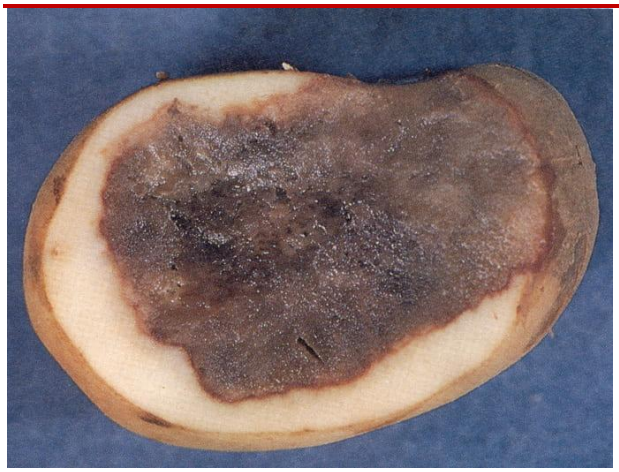
Early blight of potato. All Wisconsin potatoes have surpassed the treatment threshold of 300 P-Days. Continued preventative fungicide applications are warranted for these fields. In the past week regions of the state accumulated between 58 and 75 P-Days, slightly elevated from the previous week. For support in selecting fungicides, please consult the A3422 Commercial Vegetable Production in Wisconsin: https://vegpath.plantpath.wisc.edu/resources/a3422/

Cucurbit Downy Mildew was not reported from new counties or states this past week (https://cdm.ipmpipe.org/). There were no field disease confirmations from Wisconsin. Fungicide considerations were discussed in a previous newsletter and can be found here: https://vegpath.plantpath.wisc.edu/2026/07/12/vegetable-crop-update-jul-5-2026/

More information on the disease: https://vegpath.plantpath.wisc.edu/diseases/cucurbit-downy-mildew/

Pythium Leak of Potato. As we move through potato harvest, Pythium leak is an important tuber disease to keep in mind, particularly following periods of high temperatures and when potatoes are harvested under warm conditions. Pythium leak is caused primarily by the soilborne oomycete, or "water mold" pathogen *Pythium ultimum*, now also referred to as *Globisporangium ultimum*. The pathogen persists in soil and most commonly infects tubers through wounds created during harvest and handling. Consequently, conditions at harvest can have a major influence on the amount of disease that ultimately develops in storage.

Early symptoms typically develop around a wound as light tan, water-soaked tissue. As infection progresses, the affected area becomes wet and spongy and may swell slightly. A distinct dark boundary can develop between diseased and healthy tissue. When infected tubers are cut open, internal tissue is generally grayish to brown, wet and spongy, and cavities may develop within the decayed tissue. One of the more characteristic symptoms gives the disease its name: when an infected tuber is squeezed, watery liquid may leak or stream from the affected tissue. With advanced decay, much of the internal tuber tissue can disappear, eventually leaving an empty, papery shell. Secondary bacterial soft rot organisms can quickly colonize Pythium-infected tissue, making symptoms less distinctive and greatly increasing breakdown in storage.



Typical Pythium leak symptoms on a potato tuber demonstrating dark brown necrotic tissue with a definitive edge bordering healthy tissue. Photo credit to Cornell University.

Although we most commonly think of Pythium leak as a disease initiated by tuber wounding at harvest, we have occasionally observed an unusual in-season expression of leak during particularly hot summers in Wisconsin. These cases have tended to appear during periods of sustained high temperatures in July and has been brought to my attention primarily in russet-type cultivars. In these situations, affected tubers may develop Pythium leak while still in the hill, well before normal harvest. High soil temperatures, combined with tuber physiological stress and conditions that may compromise the developing periderm or provide small sites for pathogen entry, appear to create an opportunity for infection. This is not the typical presentation of Pythium leak, but its occurrence over multiple hot production seasons is a useful reminder that Pythium risk does not necessarily begin with the harvester. When extended periods of high July temperatures occur, particularly in susceptible russet types, it can be worthwhile to include internal tuber inspection for leak symptoms during routine test digs.

Pythium leak is strongly favored by warm conditions, with disease development particularly favorable at approximately 77–86°F. Harvest injury is also critical because wounds provide important infection courts for the pathogen. The combination growers particularly want to avoid is therefore warm tubers, warm soil, and excessive harvest injury.

Hot, dry soil can increase tuber bruising and skinning during harvest, while high tuber pulp temperatures favor rapid Pythium infection and disease development. Potatoes already affected by physiological problems such as pink eye, enlarged lenticels, or compromised skin set may also be more vulnerable to post-harvest decay.

There is no single practice that eliminates Pythium leak. Management instead depends on reducing opportunities for infection and getting harvested tubers through wound healing as successfully as possible. Key considerations include:

- **Avoid harvesting during the hottest portion of the day when possible**, particularly when soil and tuber pulp temperatures are high.
- **Minimize tuber injury.** Adjust harvesters, drops, conveyors and handling equipment to reduce cuts, abrasions and bruising.
- **Pay attention to soil moisture.** Extremely dry soil can increase harvest injury, while excessive moisture can favor water mold diseases and create additional tuber quality problems.
- **Monitor tuber pulp temperature.** Warm harvested tubers are at greater risk and deserve particular attention during storage loading.
- **Remove badly damaged or decaying tubers** when practical rather than carrying them into storage.
- **Provide conditions that promote rapid wound healing** after harvest and carefully manage ventilation as tubers are brought to appropriate storage temperatures.
- **Monitor problem lots closely.** Fields or loads with substantial harvest injury, pink eye, enlarged lenticels, poor skin set, or evidence of Pythium leak deserve additional attention during storage.

Fungicides can be useful components of a Pythium leak management program, but they should supplement rather than replace harvest and storage management. The biology of this disease makes preventing tuber injury and managing temperature particularly important.

In-season applications. Mefenoxam-containing products (FRAC 4) have historically been used for management of Pythium leak and pink rot in potato. Phosphorous acid/phosphite products (FRAC P07; historically referred to as FRAC 33) also have labels for potato tuber rot diseases, with some products permitting in-furrow and/or foliar applications. Programs may begin at planting or around tuber initiation depending upon the specific product and label.

Where a field has a history of Pythium leak, an in-season fungicide program can be considered as one component of the management strategy. However, efficacy against leak is not always consistent, particularly because infection can occur through fresh wounds very late in the production cycle or during harvest. In addition, reduced sensitivity or resistance to mefenoxam has been documented in populations of Pythium-like pathogens in potato production regions. Fungicide selection should therefore be integrated with field history, disease risk, resistance-management considerations, and the current product label.

Post-harvest treatment. Phosphorous acid products are among the more useful tools available for treating tubers as they enter storage. Certain products are labeled for post-harvest application for suppression or control of Pythium leak, pink rot and late blight tuber rot. These treatments will not restore tissue that is already extensively infected, but they can help reduce disease development and spread as tubers move through handling and into storage.

Research has also evaluated the post-harvest premix of azoxystrobin + difenoconazole + fludioxonil (Stadium) against Pythium leak, with disease reduction demonstrated in some experimental studies and cultivars. Importantly, however, Pythium leak is not currently a labeled disease target for Stadium, so it should not be recommended specifically for leak management. For Wisconsin growers, the current Commercial Vegetable Production in Wisconsin recommendations should be consulted for product choices, rates, application timing, pre-harvest intervals and restrictions. Always follow the current pesticide label; labels supersede general recommendations. https://vegpath.plantpath.wisc.edu/resources/a3422/

Pythium leak can occur alongside several other harvest and storage diseases, including pink rot, bacterial soft rot, late blight tuber rot, and Fusarium dry rot. Once secondary organisms become established, visual diagnosis can become especially difficult. A useful clue for Pythium leak is the combination of a wound-associated lesion, very wet and spongy internal decay, a distinct dark boundary between diseased and healthy tissue, and water released from affected tissue when pressure is applied. Pink rot, in comparison, typically produces a more rubbery rot in which freshly cut infected tissue develops a characteristic pink-to-salmon discoloration after exposure to air. Bacterial soft rot generally produces very soft, cream-to-tan, granular tissue and can rapidly obscure the symptoms of the primary disease.

When significant tuber decay is appearing in a field or storage, accurate diagnosis is worthwhile because management decisions—and the potential for disease to progress during storage—differ among these diseases.

Pythium leak is primarily a disease of opportunity associated with warm tubers and injury. The pathogen may already be present in the soil; our goal is to minimize the opportunities it has to infect. For most crops, the strongest management program combines several approaches: know the field history, consider an appropriate in-season fungicide program where risk warrants it, scout tubers during hot weather, harvest under favorable conditions, minimize injury, manage tuber temperature, promote wound healing, and consider an appropriate labeled post-harvest treatment for higher-risk lots. If test digs reveal Pythium-like decay, pink eye, enlarged lenticels, poor skin set, or other tuber abnormalities, that information can be valuable before the crop disappears into the pile. Higher-risk fields can then be harvested, treated, stored and monitored accordingly.