



Vegetable Disease Update

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

April 22, 2025

In This Issue:

- Chlorothalonil registration updates
- Links to the Commercial Vegetable Production in Wisconsin A3422 Guide, the WI Potato and Vegetable Growers Association & UWEX Grower Education Conference Proceedings, Wisconet, and the UW Vegetable Disease and Insect Forecasting Network tool

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

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

Changes in chlorothalonil registration

This past week, Sipcam Agro requested the cancellation of their Wisconsin Special Local Needs (SLN) registration for Echo products for extended use on potatoes for disease control. This cancellation was effective immediately (April 11, 2025) for WI-210004 Echo ZN, WI-210002 Echo 720, and WI-210003 Echo 90DF. The cancellation was due to the EPA Interim Decision on chlorothalonil to reduce the maximum use from 11.25 lb/ai/acre to 8.0 (non-vulnerable soils) or 6.5 lb/ai/acre (vulnerable soils).

This update was provided by Alyssa Foss, Pesticide Special Registration/Worker Protection Program Manager of the Bureau of Agrichemical Management/Division of Agriculture Resource Management of the Wisconsin Department of Agriculture, Trade, and Consumer Protection (Alyssa.Foss@wisconsin.gov).

It is possible that ADAMA, registrant for Bravo ZN, Bravo 720, and Bravo 90DF, will also cancel their SLN with the same justification. The Bravo products currently have a WI SLN which expanded the allowable rate of chlorothalonil from 11.25 to 16 lb/ai/acre until December 31, 2027.

What is happening with chlorothalonil registration in the US?

Chlorothalonil was subjected to a routine 15-year re-registration review in 2023 by the Environmental Protection Agency (EPA) Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to determine whether a currently registered pesticide continues to meet standards. The EPA issued a proposed interim decision (PID) for public comment and review (use case number 0097 Sep 2023 chlorothalonil). Many provided feedback on the proposed reductions in allowable usage for critical crops including potatoes and vegetables. The EPA also evaluated the risk of chlorothalonil usage to federally listed species in consultation with the services.

In January of 2025, the EPA released the interim decision (ID) on chlorothalonil which outlines changes to the registration to protect human and environmental health. The document is available online:

https://www.gcsaa.org/docs/default-source/2016-advocacy/final-chlorothalonil-interim-decision.pdf?sfvrsn=632dd83e_1

Acute and chronic risks driven by drinking water exposure and ecological risks were identified. The EPA could not accurately assess risks to pollinator species (lack of data) and the agency is developing a data call-in for additional pollinator data to fully evaluate risks to non-target terrestrial invertebrates, especially pollinators. The identified mitigation measures for the lab include: standardization of label, reduction in maximum annual application rates, buffers to all conservation and aquatic areas, and prohibition of application to soils saturated with water. To address drinking water exposure via groundwater contamination, lower max rates for areas where soils are vulnerable to chlorothalonil leaching into groundwater. The EPA has determined that new personal protective equipment (PPE) and respirator fit-testing measures are necessary for occupational handlers.

It's unclear when geographically specific mitigation measures will be implemented using the Agency's Bulletin's Live! Two system. If you visit the online tool, you find that "Chlorothalonil does not currently have any listed species bulletins. However, the Agency is proposing the following Bulletins language be added to all chlorothalonil product labels to implement the 2011 NMFS BiOp." <https://www.epa.gov/endangered-species/endangered-species-protection-bulletins>

Regarding "vulnerable soil" status, I offer language from the interim decision (pages 75 and 76): "EPA identified dietary risks of concern and ecological risks of concern for chlorothalonil and identified necessary rate reductions to reduce the amount of chlorothalonil entering drinking water, thus reducing dietary exposure and risk in vulnerable soils. "Vulnerable soils" are sand, loamy sand, or sandy loam soil (as defined by USDA's soil classification system without a restrictive layer that impedes the movement of water through soil) with less than 2% organic matter content and occur where the water table is 30 feet or less from the surface. Soils that do not meet all three of these criteria are considered "non-vulnerable." The annual application rate reductions partially mitigate the ecological risks identified. For some uses, a maximum annual application rate for vulnerable soils was not identified because the maximum annual application rate necessary to address dietary exposure and risk in vulnerable soils is equivalent to the maximum annual application rate necessary to address ecological risks. When this is the case, only one maximum annual application rate is identified for a use and that rate applicable to all soil types. See Appendix B for use-specific label language."

What happens now?

New labels have been submitted to the Agency on/before March 6, 2025. After review by the Agency, registrants will have time to sell or distribute any products with the previous labeling. Existing stock provision is typically one year. Once that time ends, companies can no longer sell or distribute products with the old label. Applicators who have products with the old label are allowed to continue using under the old label.

In short, what does this mean for using chlorothalonil this growing season?

*The **new** chlorothalonil labels will allow:*

8 lb of active ingredient per acre/year when growing potato on non-vulnerable soils

6.5 lb of active ingredient per acre/year when growing potato on vulnerable soils

*For comparison, the **old** chlorothalonil labels allowed:*

11.25 lb of active ingredient per acre/year when growing potato on any soil type

16 lb of active ingredient per acre/year when growing potato on any soil type with Wisconsin's Special Local Needs (SLN) registration. The SLN registrations for Sipcam Agro Echo products were canceled on April 11, 2025. The SLNs for ADAMA's Bravo WeatherStik, Bravo Ultrex, and Bravo ZN products are still in place until 12/31/2027.

What could a conventional potato disease management plan look like with reduced use of chlorothalonil?

The new registration for chlorothalonil will likely require a change to your foliar fungicide program in potato in Wisconsin. You can use roughly half of the amount of chlorothalonil per acre per year than you could previously.

-Consider a reduction in the rate of chlorothalonil in the early season when you have less foliage to protect. For Bravo WeatherStik, for example, you can start the season using a $\frac{3}{4}$ pt/A rate and increase to a 1 or 1 $\frac{1}{2}$ pt/A rate when foliar mass increases.

-Consider an alternative broad-spectrum fungicide, such as mancozeb or copper, in place of chlorothalonil. Coppers can provide additional protection against plant-to-plant spread of bacterial pathogens while offering a broad-spectrum control of diseases. While there is also a Proposed Interim Decision (PID) for mancozeb, the reduction in use for potato is on the seed treatment use only. Foliar uses should not be impacted. PID for Mancozeb: <https://www.nationalpotatocouncil.org/wp-content/uploads/2024/07/EPA-HQ-OPP-2015-0291-0092-PID-7-17-24.pdf>

-Consider removing a broad-spectrum fungicide from the mix if you're including multiple fungicides of different single-site modes of action on the same pathogen target. That is, if you're using an SDHI fungicide such as boscalid (Endura; FRAC 7) tank-mixed with a DMI fungicide such as difenoconazole (Top MP; FRAC 3) to manage early blight (*Alternaria solani*). The two modes of action on the same target help to mitigate the development of fungicide resistance. I typically recommend the inclusion of a broad-spectrum fungicide when using single-site mode-of-action fungicides, especially against intractable soil and residue-borne pathogens, however, with label restrictions this may be a reasonable approach as a 'least worst' option.

The 2025 Commercial Vegetable Production in Wisconsin A3422 book is available as a searchable pdf at the link below. If you would like a hard copy of this guide, please let me know at gevens@wisc.edu. I have a limited number of printed books. If more books are needed, I can coordinate the printing of another batch. <https://cropsandsoils.extension.wisc.edu/articles/2025-commercial-vegetable-production-in-wisconsin-a3422/>

The 2025 UW Division of Extension and Wisconsin Potato and Vegetable Grower Education Conference Proceedings are available online at the link below. I still have hard copies of the proceedings if you would like. Please contact me at gevens@wisc.edu. The website offers the printed proceedings in addition to the presentations offered by our speakers at the conference that was held in Stevens Point during February 4-6, 2025. The proceedings include 2024 field trial reports, abstracts from posters presented at the meeting, as well as content related to the presentations. <https://wpvga.conferencespot.org/event-data>

The **Wisconsin Environmental Mesonet or Wisconet** is a growing network of weather and soil monitoring stations across Wisconsin, designed to provide high-quality data at high spatial and temporal resolutions. There are currently 58 Wisconet stations with plans to expand to around 80 by 2026. Each station provides more than a dozen measurements every 5 minutes. <https://wisconet.wisc.edu/>

The UW-Madison Vegetable Pathology and Entomology Research and Extension Programs coordinate a useful tool, the **UW Vegetable Disease and Insect Forecasting Network**, to help determine risk for vegetable disease and insect pests. The goal of the tool is to get in front of damage by mitigating risk through appropriately timed inputs. This site is used throughout the growing season to support management recommendations offered in this newsletter. <https://agweather.cals.wisc.edu/vdifn>