PURDUE UNIVERSITY | Extension

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VEGETABLE CROPS HOTLINE

A newsletter for commercial vegetable growers prepared by the Purdue University Cooperative Extension Service.

In This Issue

From The Editor's Desk

(Petrus Langenhoven, plangenh@purdue.edu, (765) 496-7955)

Dear Valued VCH Readers,

Welcome to this week's edition of the Vegetable Crops Hotline!

As we approach the final chapter of Indiana's vegetable growing season, this marks our penultimate newsletter issue for the year. While the calendar suggests we should be settling into typical late-season conditions, the 10-day forecast tells a different story—temperatures are trending above average for this time of year, potentially extending growing opportunities and requiring continued attention to crop management.

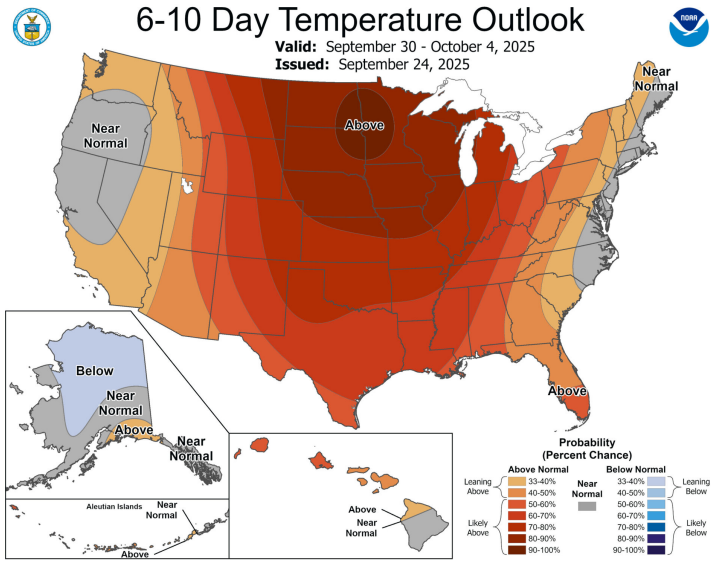


Figure 1. Temperature outlook for the next 6-10 days.

Even as the active growing season winds down, this is an ideal time to focus on the foundational practices that will set you up for success in future seasons. Food safety remains a year-round priority, and we're pleased to highlight an upcoming Cleaning and Sanitation Workshop on December 9th at the Purdue Extension Food Safety Training Hub in Vincennes. These practices not only protect public health but also build the customer trust that drives long-term business success.

This week's newsletter also introduces valuable resources for the seasons ahead, including the newly redesigned cli-MATE portal from the Midwestern Regional Climate Center, which provides streamlined access to climate data that can inform your planning decisions. We'll also address an important legislative development with Indiana Senate Bill 28 and what it means for agricultural water users, plus share insights from the recent Southwest Purdue Agricultural Center Pumpkin Field Day.

As we prepare for our final newsletter of the season, we encourage you to take advantage of these late-season educational opportunities and begin considering how this year's experiences can inform your planning for next season.

Interesting Find of the Season

During the winter of 2025, I was searching for new, tapered pepper varieties to include in my high tunnel pepper variety trial. I came across a variety called Habanada Sweet. This variety was developed from the habanero pepper, but it is sweet and non-spicy. The fruit has beautiful floral notes and a bright, tangerine-colored appearance when mature. As far as being heatless, most of the fruit is. However, as you approach the placenta, near the point of attachment of the fruit to the pedicle, it becomes a little spicy (a few minor Scoville heat units). Nothing overwhelming. Read more about this in January 2026 when the complete pepper variety evaluation report is published in the Midwest Vegetable Trial Report.

Figure 1. Habanada Sweet Pepper (Photo by Petrus Langenhoven).

Indiana Horticulture and Small Farm Conference, March 3-5, 2026

Save this date! In 2026, for the very first time, the Indiana Horticulture Conference & Expo and the Indiana Small Farm Conference are joining forces to present a joint meeting at the Hendricks County Fairgrounds from March 3 to 5. Join us as we merge two popular Purdue Extension events into one dynamic conference. Designed for specialty crop growers and small farmers region-wide, featuring premier educational sessions.

Growers and Purdue Extension Educators

Your input and expertise make this newsletter a truly useful resource. If you have hot topics you'd like us to cover, success stories to share, or questions for our Extension specialists, please get in touch with us at plangenh@purdue.edu or contact the specialist directly. We also welcome high-quality photos of pest issues, unusual symptoms, or innovative production practices you've implemented on your farm.

Website Links in Newsletter Articles

We frequently include links to websites or online publications. If you are unable to access these resources, please don't hesitate to contact your local Purdue Extension office or us to request a hard copy of the information.

Midwest Vegetable Production Guide

The 2025 Midwest Vegetable Production guide is now available for growers to visit online at **mwveguide.org**, or you can download and print a guide from your computer at **mwveguide.org/guide**. The guide can also be purchased for $15 per copy. Contact your Extension Office or Stephen Meyers (slmeyeres@purdue.edu) directly to buy a copy.

Midwest Vegetable Trial Reports

Are you still considering purchasing vegetable seeds? The Midwest Vegetable Trial Reports feature many articles to help you make an informed decision. The resource also hosts research results related to production.

Best regards,

Petrus Langenhoven
Clinical Assistant Professor and Vegetable Extension Specialist
Department of Horticulture and Landscape Architecture
Purdue University

2025 SWPAC Pumpkin Field Day Recap

(Wenjing Guan, guan40@purdue.edu, (812) 886-0198), (Cesar Escalante, escalac@purdue.edu), (Laura Ingwell, lingwell@purdue.edu, (765) 494-6167), (Stephen Meyers, slmeyers@purdue.edu, (765) 496-6540) & (Liz Maynard, emaynard@purdue.edu, (219) 548-3674)

This article provides a summary of information provided by Purdue Extension specialists at the 2025 Southwest Purdue Agricultural Center (SWPAC) Pumpkin Field Day.

◦ Diverse Pumpkin and Winter Squashes

Dr. Liz Maynard gave a presentation on the diversity of pumpkins and winter squashes, covering different market types, their botanical classifications, maturity indicators, and storage life. Dr. Maynard's presentation is available here. Dr. Wenjing Guan highlighted the crops grown in the field (Figure 1), including Jack-o'-lantern pumpkins, acorn, butternut, and kabocha, etc., and discussed their performance this year in southern Indiana. We extend special thanks to Barry Rupp of Rupp Seeds and Ryan Kingma of Rispens Seeds for donating the pumpkin seeds and providing valuable information on specific cultivars. Stay tuned for our upcoming publication on this topic.

Figure 1. Pumpkin varieties showcased at the field day (Photo by Wenjing Guan).

◦ Pumpkin Diseases

Dr. César Escalante presented on pumpkin diseases. He highlighted the top pumpkin diseases in Indiana, including phytophthora blight, powdery mildew, black rot/gummy stem blight, Plectosporium blight, bacterial fruit spot, viruses, and an emerging disease, cucurbit yellow vine disease. If you are interested to learn more about these diseases, here are the recommended readings: *Managing Phytophthora Blight of Cucurbits* and *Downy Mildew of Cucurbits* by Dr. Dan Egel. Pathogen Spotlight: *Serratia ureilytica* Causing Cucurbit Yellow Vine Disease by Dr. Kensy Rodriguez from Cornell University and Dr. Escalante. Dr. Escalante also shared the *Pumpkin Disease Management Timeline for Indiana* and the recently updated *Pumpkin Fungicide Schedule*.

◦ Pumpkin Insects and Beneficials

Dr. Laura Ingwell discussed several major insect pests often observed on cucurbit crops and their management. For more information, refer to *"Insect Management in Cucurbit Crops*." The most up-to-date management strategies are available on the Midwest Vegetable Guide website by selecting 'Pumpkin' and targeted pests. Dr. Ingwell also explained how to use pheromone

traps to monitor Squash Vine Borer in cucurbit crops and her monitoring network. Lastly, she helped the audience identify pests and beneficial insects in pumpkin fields. This time of year, insect pests were sparse, but we found many natural enemies, including damsel bugs (Figure 2).

Figure 2. Damsel Bugs (photo by Laura Ingwell).

◦ Pumpkin Weed Management

Dr. Steve Meyers reviewed the most common weeds in cucurbits, including pigweeds, common lambsquarters, purslane, and crabgrass, based on a 2019 survey. He explained why weeds are particularly problematic in pumpkin crops and discussed herbicide options, as well as recent research on herbicides such as Dual Magnum and Reflex. Dr. Meyers also discussed the use of cover crops for weed management. Graduate student Helen Angelina demonstrated the effects of different rye termination methods on weed control in the field plots. Stay tuned for the latest research findings from this project.

Field days are a valuable opportunity to engage with specialists, get your questions answered, and learn about the latest research. We look forward to seeing you at our future events.

Are You Ready for Challenges to Your Irrigation Water Use?

(Lyndon Kelley, kelleyl@msu.edu)

The recent passage of Indiana Senate Bill 28, along with provisions from the original Indiana water rights legislation, may raise concerns for landowners who utilize groundwater resources. If you have significant water usage due to irrigation or other agricultural activities, being prepared for challenges from your neighbors and community may help ensure that you can continue to use your water resources.

SB 28 added provisions to the established Indiana groundwater rights law, Indiana Code 14-25-4, and now allows owners of Significant Water Withdrawal Facilities (SWWF) (greater than 70 gallons per minute pump capacity) to file complaints with Indiana's DNR about neighboring significant volume water uses. Previously, this law only applied to complaints from small well users (those using less than 70 gallons per minute) against neighboring significant-volume well users.

Scrutiny over Indiana's water use policy over the past year has also drawn attention to provisions within the legislation, which state that no significant volume of groundwater use shall cause permanent depletion of the natural resource. Even though a restricted-use area has never been designated by the DNR, the implications of the regulation may be used to restrict agricultural water use in the future.

IC 14-25-3-4 Restricted use areas; designation

Sec. 4. (a) The department may, by rule or order, when the department has reason to believe it is necessary and in the public interest, designate certain areas of Indiana where the withdrawal of ground waters exceeds or threatens to exceed natural replenishment as restricted use areas. Before the department designates an area as a restricted use area, the department shall do the following:

(1) Have surveys made of the groundwater resources of the area.

(2) Determine the safe annual yield of the basin.

(b) The department may do the following:

(1) Cooperate with the agencies of the federal government engaged in making groundwater surveys.

(2) Accept and use the findings of other agencies of the federal and state governments as a basis of the department's decisions.

The combination of these legislative acts is a double-edged sword for Indiana irrigators, as it protects them from large industrial water use that may deplete the aquifer and cause challenges, but also raises questions about irrigation and its potential to deplete both surface water and groundwater resources.

At least one hydrogeology firm active in Indiana has predicted that irrigation water use has depleted or has the potential to deplete water resources in Fulton, Steuben, and LaPorte Counties in Indiana. Especially in such cases, it is essential for SWWF users to document their water use, well performance, and the impacts on water resources.

Monitoring Static Water Levels

A good starting point is to record static water levels before beginning irrigation each year, at mid-irrigation season, and again at the end of the irrigation season. Take these measurements at least 72 hours after the last pumping cycle has occurred. Multiple years of these records can be used to monitor the long-term impacts of pumping. Data from both irrigation wells and nearby home wells can help paint a picture of the effect or lack of natural resources in your area.

The Indiana DNR will develop rules to implement Indiana Senate Bill 28 in the coming months, and its staff will be invited to participate in irrigation and water use-related educational meetings coming this winter. If you are concerned about your water rights, water use, and the sustainability of the water resources in your area, be sure to participate in these discussions.

Over the past two decades, several landowners have organized

groups interested in protecting the use of large volumes of water and have collected local data from agricultural wells. Their goal is to document well performance and any effect on water resources. A forerunner of this data collection was the LENK group, which represented irrigators in LaGrange, Elkhart, Noble, and Kosciusko counties in Indiana. In 2018, several of the well-monitoring efforts were consolidated under the banner of Midwest Water Stewards. https://midwestwaterstewards.com/. Midwest Water Stewards offers monitoring programs for SWWF that provide an in-depth look at how their wells perform, how pumping affects the water resources, and how seasonal fluctuations relate to rainfall and drought.

My SWWF was here first- will that matter?

Indiana, like most states east of the Mississippi River, follows a Riparian Doctrine. This doctrine allows landowners to use water from surface waters adjacent to their property or groundwater accessible from their property to the extent that their use does not interfere with other riparian's water use. Indiana's appellate level or higher rulings that make up the doctrine hold all landowners use of the water equal with no preference to who was using the water first.

Indiana follows what is termed the Regulated Riparian Doctrine policy, meaning the State has enacted specific requirements for water users ranging from well construction to investigations of water conflict disputes. A list of these statutes and rules can be found at the Indiana DNR Water Resources website. https://www.in.gov/dnr/water/statutes-and-rules/

Could my SWWF be Challenged by Local Lake Landowners?

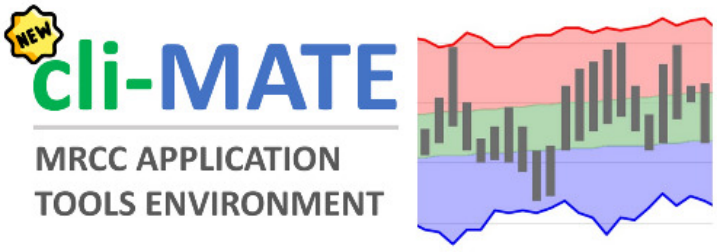
Indiana freshwater lakes are protected from significant lowering of the lake level by SWWF pumping through Indiana Code 14-25-5. "Freshwater lake" is defined as being: 1) 10 acres in size, 2) of natural origin, 3) originally constructed to retain water, and 4) existed at least 5 years before SWWF's pumping. For the reduction of pumping by the SWWF to be required, the DNR must document a significant lowering of the lake level by the SWWF. The SWWF must be within ½ mile of the freshwater lake, and the water level lowering must result in "Significant Environmental Harm" as described in Rule 312 IAC 11.5.

Long-term monitoring of lake levels is important for owners of SWWF within ½ mile of a lake. Lake level monitoring may already be in place through state or local governmental activities or through monitoring activities conducted by local lake landowners. If you believe that your water use may be challenged, starting a third-party monitoring program may be a very cost-effective way to distinguish your pumping effects from those of dry weather cycles that seem to happen every decade or so.

Explore the New cli-MATE: Your self-service portal to U.S. climate data, maps, and more

(Austin Pearson, pearsona@purdue.edu, (765) 675-1177)

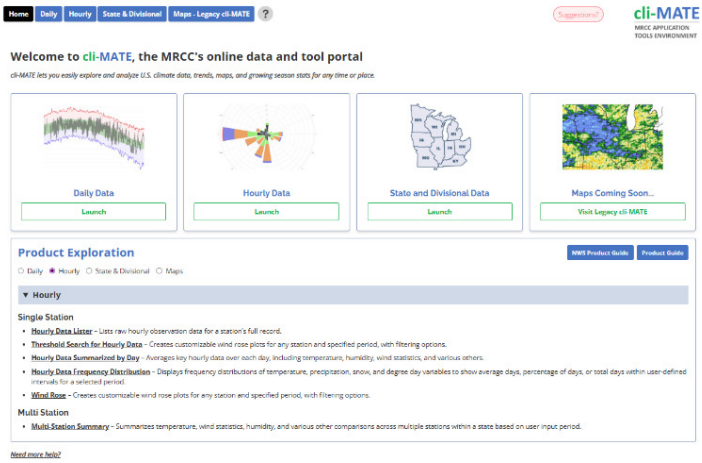
The Midwestern Regional Climate Center (MRCC) has launched a new version of cli-MATE, its main online portal for United States climate data, analyses, statistics, maps, graphics, and other information. For over 40 years, MRCC has provided climate data to the public—initially through printed reports and later digitally as web access grew. The latest redesign of cli-MATE builds on this history, offering streamlined access to US climate data.



Through cli-MATE, users can explore weather and climate data at multiple time scales (hourly, daily, monthly, seasonal, and annual) from reporting stations across the country. The platform serves a wide array of users. For instance:

- TV meteorologists use the platform to compare current data to historical records.
- Researchers rely on cli-MATE for climate model verification and enhancement.
- Consulting meteorologists use it to confirm storm damage and support casualty investigations.
- Emergency managers turn to the platform to guide search and rescue operations.
- Agronomists monitor crop growth progress with various degree day offerings.
- State agencies incorporate cli-MATE data into hazard mitigation strategies.

While new features had been added steadily over the past 15 years, the prior version of cli-MATE faced growing challenges as advances in web and software technology began to outpace system updates. Thanks to financial support from NOAA's National Centers for Environmental Information (NCEI), the MRCC undertook a multi-year effort to overhaul the back-end code and front-end design for an improved user experience.



The result is a portal that reflects both modern data needs and user feedback. The updated cli-MATE offers a cleaner interface with enhanced styling for a more straightforward and intuitive user experience, along with faster and more dependable performance, and revamped products. The MRCC design team set out to build a system both powerful and accessible, ensuring cli-MATE offers deep analytical capabilities for experts while remaining approachable for first-time users.

If you're unsure how to start with cli-MATE, check out the help page, which offers step-by-step instructions for exploring the platform. The cli-MATE homepage includes a Product Exploration section that describes each available tool. Additionally, a Product Guide is available with detailed navigation information for various products. While cli-MATE provides significant improvements over its predecessor, the MRCC continually updates the system and introduces new products. Map products currently return users to the legacy cli-MATE interface, but will soon be replaced with newer, high-resolution mapping products in the updated environment.

If you have feedback, the MRCC wants to hear about it! Submit your comments here. Also, please don't hesitate to email mrcc@purdue.edu with any questions.

Cleaning and Sanitation Workshop – December 9

(Doriane-hans Sossou, dsossou@purdue.edu), (Tari Gary, tgary@purdue.edu) & *(Amanda J Deering, adeering@purdue.edu)*

Keeping produce safe and meeting buyers' and regulatory expectations starts with strong cleaning and sanitation practices. Farms that implement proper procedures not only protect public health but also improve efficiency and build trust with customers. To help growers and farm workers strengthen these skills, we invite you to join us on **December 9th from 1:00 PM to 5:00 PM at the Purdue Extension Food Safety Training Hub in Vincennes** for a **free**, hands-on Cleaning and Sanitation Workshop. Attendees will learn from Purdue Extension experts about:

- Cleaning and Sanitizing Basics: wash/pack area practices, sanitizer dilution, and using a Dosatron.
- Regulatory Requirements: understanding cleaning and sanitation rules for produce safety.
- SSOPs and Recordkeeping: writing Sanitation Standard Operating Procedures and maintaining records for third-party audits preparation.
- Water Sample Collection: hands-on activity to properly collect and handle a water sample
- ATP Meter Activity: using an ATP meter to test cleaning and sanitation efficacy in real time.

Don't miss this chance to gain practical, farm-ready skills that strengthen food safety programs and prepare for audits registration is free!

Registration Link:
https://purdue.ca1.qualtrics.com/jfe/form/SV_81blwfocQNWOSYS

***Date**: 12/09/2025*

***Time**: 1-5 pm*

Location

Purdue Extension Food Safety Training Hub in Vincennes

4207 North Purdue Road, Vincennes, IN, 47591

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Editor: Petrus Langenhoven | Department of Horticulture and Landscape Architecture, 625 Agriculture Mall Dr., West Lafayette, IN 47907 | (765) 496-7955