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THE PURDUE LANDSCAPE REPORT

In This Issue

Welcome to the 2025 Purdue Landscape Report

(Kyle Daniel, daniel38@purdue.edu)

Welcome to the 2025 Purdue Landscape Report! As we embark on a new growing season, our team is committed to providing you with timely, science-based information to support the health and beauty of landscapes across the Midwest. Throughout the season, we will deliver bi-weekly newsletters featuring articles from Purdue faculty and staff across many disciplines.

Figure 1. The Purdue Turf and Landscape Field Day will be held on July 8th in West Lafayette.

As professionals in the green industry, your expertise is essential in maintaining healthy, sustainable, and resilient landscapes. The Purdue Landscape Report is dedicated to equipping you with science-based insights on pest management, plant health, environmental trends, and best practices. Whether you're a landscaper, arborist, nursery grower, garden center, or turf manager, we strive to provide timely information that directly supports your work.

We encourage you to engage with our content, attend educational events, and reach out with questions or topics you'd like us to cover. Your feedback helps us tailor our reports to the real-world challenges you face.

Good luck on a successful 2025 season!

If you are looking for specific information or articles, you can search here: https://purduelandscapereport.org/search/

Here are some of our most-read articles so far this year:

Stop making these arborvitae mistakes: Common transplant problems of arborvitae

Contorted Filbert: A gnarly problem plant

What is an inch of water?

Tiny little black bugs that deliver a big bite

When Roundup Isn't Roundup: Clearing up the confusion between products

Another Successful Indiana Green Expo in the Books

(Kyle Daniel, daniel38@purdue.edu)

The Indiana Green Expo (IGE), held from February 10 to 12 at the Indiana Convention Center in Indianapolis, attracted 1,636 attendees and featured 108 exhibiting companies in the trade show. Organized by the Indiana Nursery and Landscape Association (INLA) and the Midwest Regional Turf Foundation (MRTF), the event offered a comprehensive blend of educational sessions and a well-attended trade show.

Figure 1. Classes were well attended at the 2025 Indiana Green Expo.

The education, spanning all three days, featured nine workshops and 17 educational tracks, including a dedicated Spanish track. Sessions covered a wide array of topics, from sustainable landscaping practices to advanced turf management techniques. Attendees had the opportunity to earn Pesticide Continuing Credit Hours (CCHs), ISA and GCSAA Continuing Education Units (CEUs), credits towards the Local Technical Assistance Program, and Indiana Accredited Horticulturist (IAH) certification.

The two-day trade show, held on February 11 and 12, showcased 108 exhibitors in Hall D of the Indiana Convention Center. Vendors presented the latest products and technologies in lawn care, landscaping, and horticulture. The event also featured trade show talks and a New Product Showcase, highlighting innovations poised to impact the Midwest market.

Figure 2. Over 100 exhibitors attended the 2025 Indiana Green Expo.

On the evening of February 11, both INLA and MRTF hosted individual award receptions, recognizing outstanding contributions and achievements within the industry, and awarding scholarships to the next generation of green industry professionals. These gatherings provided attendees with valuable networking opportunities and a chance to celebrate industry advancements.

IGE 2025 served as a vital platform for education, networking, and the exchange of innovative ideas, reinforcing its status as Indiana's largest and most comprehensive green industry event.

Mark February 9-11, 2026 on your calendar to attend the next Indiana Green Expo.

Insects are waking up – are you prepared?

(Alicia Kelley, ajkelley@purdue.edu)

The bitter winter cold has finally passed us (or has it? It's hard to tell in the Midwest)! The days are getting warmer and longer, and that means the insects are coming out of their overwintering stages. As you prepare for your landscaping and gardening this year, are you implementing preventative measures for pests? Now is the time to think about those strategies to minimize the damage to your plants.

Preventing pest issues is foundational to integrated pest management. The first step is always to start with healthy and clean plants. Don't be afraid to bring a hand lens to the store and check for those hard-to-see pests! You don't want to bring a problem home. Next, remember that many pests will thrive due to improper watering, light conditions, or fertilization. Avoid these issues by reviewing the recommendations for your plants and consulting a soil test. (Don't think soil tests are important? Read more about why they are essential!)

Finally, which pests/diseases do you anticipate? What are the most common pests on the plants in your landscape? Perhaps you have had issues in past years and know what to expect. Review the biology of these pests and consider implementing preventative measures now. Let's look at a couple of examples of frequent landscape pests and some management options you can add to your list of spring preparations.

Spider mites

Spider mites overwinter on the host plant or in leaf litter. Around this time of year, cool season mites such as spruce mites and boxwood mites are the dominant issue. Check your plants now for these spider mites, and scout regularly to make sure populations aren't getting out of control. A rainy spring will help keep the pressure low. If you have to spray, avoid chemicals that will harm natural enemies, which are vital to spider mite management. (Learn more about spider mite management: Spider Mites on Ornamentals; and check out the Purdue Plant Doctor Quick Guide: Managing Spider Mite Mayhem)

Fig 1. Spruce mites on spruce. (Image: Petr Kapitola, Central Institute for Supervising and Testing in Agriculture, Bugwood.org)

Fig. 2. Boxwood mites on boxwood. (Image: Rayanne Lehman, Pennsylvania Department of Agriculture, Bugwood.org).

Bagworms

Bagworms overwinter as eggs in the bags left on the tree. They're frequent pests of arborvitae, junipers, and several other trees and shrubs. Take action now to prevent an infestation in the summer that requires costly pesticides. Manually remove the bags from your tree and drown them in soapy water. (Learn more about bagworm management: Bagworms).


Fig 3. Bagworms overwinter as eggs in their cocoon-like bags. (Image: John Obermeyer, Purdue Entomology Extension).

Lace bugs

Lace bugs may overwinter as eggs or adults, depending on the species. They become active again in the spring, so now is a good time to check for these pests. Focus on the undersides of the leaves where the pests are found. Lace bugs prefer hosts planted in sunny areas with a lack of plant diversity, so consider including some flowering plants in your landscape to provide pollen and nectar to beneficials. (Learn more about Lace bug management from the Purdue Plant Doctor Quick Guide: Managing Lace bugs).


Lacebug adults. (Image: John Obermeyer, Purdue Entomology Extension).

What pests do you encounter in the landscape? Take a moment to review their biology and your options for preventative management. Be proactive now and reduce your pest problems for the season ahead.

Smooth Patch of Oak

(Tom Creswell, creswell@purdue.edu)

These oak trees are showing the symptoms of smooth patch (Figures 1, 2, 3). This condition is the result of a fungal infection that is restricted to the outer bark, causing it to slough off. The bark layer remaining is smoother and lighter in color than uninfected, normal bark. Patches can vary from a few inches to a foot or more in diameter and may occur on branches as well as the trunk. Several fungi can cause this condition. A common species, *Aleurodiscus oaksii*, produces clusters of flat, disc-like spore-bearing structures on the surface of the smooth bark. These structures are gray or beige in color and are usually less than 1⁄2 inch in diameter (Figure 4). The best time to see this interesting phenomenon in the forest is during wet periods in late winter before new spring growth begins, when the light gray bark stands out in the light penetrating the canopy. The fungal structures shrink when dry so will be more apparent following rainy weather.

Figure 1: Smooth patch symptoms beginning to merge on trunk of white oak.

Figure 2: Lower trunk of white oak with smooth patch symptoms.

The fungal structures may be mistaken for wood decay fungi, but because smooth patch fungi invade only the nonliving, outer bark tissues, they do not affect the health of the tree. No control measures are needed.

Figure 3: Isolated area of smooth patch near base of white oak.

Figure 4: Aleurodiscus oaksii fruiting structures on bark.

A Look at the MRCC's Soil Temperature Climatology

(Austin Pearson, pearsona@purdue.edu)

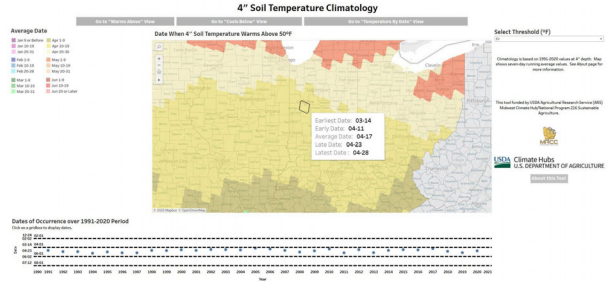
Spring field operations have already begun across the state, including tillage, anhydrous ammonia applications, and even some planting. Temperatures look up from here, but we cannot rule out periods of cooler conditions between now and May that could impact crop emergence. As of March 18, 2025, the 7-day average 4-inch soil temperature at the Purdue Agronomy Farm (ACRE) was 40.5°F, according to data derived from the **Purdue Mesonet Data Hub**. Daily soil temperature data can be accessed through the Data Hub, which can be downloaded to compute 7-day running average temperatures. A future update will allow 7-day soil temperatures to be readily accessible.

How does the current soil temperature compare to those of previous years? A collaboration between the **Midwestern Regional Climate Center (MRCC)** and the **USDA Midwest Climate Hub** has resulted in the **Soil Temperature Climatology Tool**, which can provide that answer. This tool offers historical statistics for 4-inch soil temperatures across the North Central United States from 1991 to 2020. It supports management decisions by answering key questions such as:

- ***Average Crossing Dates:*** On which day of the year does

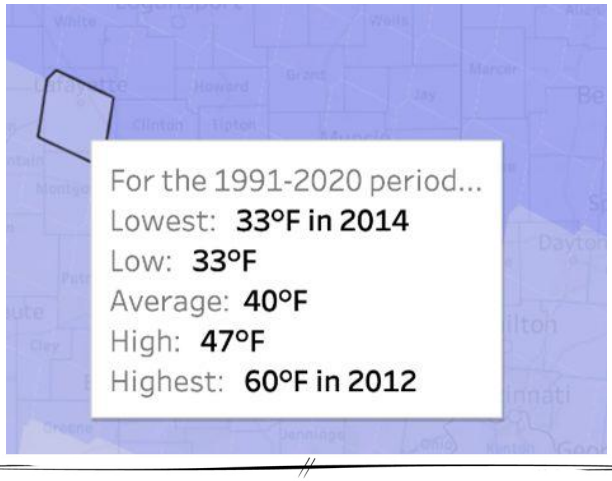
a location's 7-day average soil temperature typically rise above or fall below a specific threshold, such as 50°F?

- ***Early or Late Events:*** What constitutes an early or late date for 7-day average soil temperatures to cross the 50°F threshold?
- ***Record Dates:*** What are the earliest and latest recorded dates for 7-day average soil temperatures to cross the 50°F threshold?
- ***Date Distribution:*** How are the dates distributed when 7-day average soil temperatures rise above 50°F?



The tool utilizes daily average 4-inch soil temperature data from the **North American Regional Reanalysis (NARR)**, available at approximately 20-mile grid spacing from 1991 to 2020. The MRCC has recently added features to the tool, including a time series of all occurrences over the 1991-2020 period and another feature that allows users to select a date and see the historical range of temperatures on that chosen date.

To revisit the original question, the 7-day average soil temperature at ACRE on March 18, 2025, was 40.5°F. This temperature is considered climatologically normal, as it aligns with the 1991-2020 average displayed in the Soil Temperature Climatology tool. You can verify this information by clicking on "Go to 'Temperature by Date' View" and selecting March 18. In comparison, the 7-day average soil temperature at a depth of 4 inches reached 60°F in 2012, while the lowest recorded temperature was 33°F in 2014. That's quite the spread!



More Reports of People Receiving Unsolicited Seeds

(Kyle Daniel, daniel38@purdue.edu)

Some of you may recall news in 2020 about unsolicited seeds being sent in the mail from overseas (https://www.purdue.edu/newsroom/archive/releases/2020/Q3/unsolicited-seeds-could-wreak-havoc-on-agriculture,-environment,-state-officials-warn.html).

Figure 1. If you receive seeds that you didn't order, do not plant or throw them away.

There have now been recent reports of this happening again. Ric Bessin, Entomology Extension Specialist, and Joe Collins, Deputy State Entomologist, from the University of Kentucky, wrote about reports of unsolicited seeds from the south, northeast, and central US. You can read their report here: https://kentuckypestnews.wordpress.com/2025/03/18/reports-of-unsolicited-seeds-being-received/

If you receive seeds of unknown origin, it's important that you don't plant or dispose of the seeds. They could be invasive, noxious, or diseased.

Instead, if you receive unsolicited seeds, you should:

- Keep the seeds and packaging, including the mailing label, but do not open the seed packet;
- Place all contents in a zip-top bag, then place the bag in an envelope or small box and mail it to:

Jason Allen – Indiana State Plant Health Director

Attn APHIS PPQ

1305 Cumberland Ave Unit 102

West Lafayette, IN 47906

- If you cannot mail the items, do not dispose of them. Keep the seeds, packaging and mailing label and contact the Indiana Department of Natural Resources Division of Entomology & Plant Pathology at 866-663-9684 or **DEPP@dnr.IN.gov**.
- Anyone who has already planted seeds should not dispose of the plants or soil. Contact the Indiana DNR Division of

Entomology & Plant Pathology at the phone number and email address above.

- Never plant seeds of unknown origin.

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