

INTEGRATED PEST MANAGEMENT

# Insights



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Photo by Lindsay France, Cornell University



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## UConn Extension IPM and Sustainable Landscapes Programs

*By Victoria Wallace, Extension Educator and Connecticut State IPM Coordinator*

The University of Connecticut's integrated pest management (IPM) program educates agricultural producers, green-industry professionals, and the public about environmentally sound, sustainable, science-based approaches to pest management.

UConn IPM team members conduct educational sector-specific workshops, pesticide safety training, consultations for commercial agricultural operations, diagnostic services, and applied research.

The program has developed numerous factsheets, identification guides, and outreach materials ([ipm.cahnر.uconn.edu](http://ipm.cahnر.uconn.edu)), published in English as well as Spanish ([ipm.cahnر.uconn.edu/manejo-integrado-de-plagas](http://ipm.cahnر.uconn.edu/manejo-integrado-de-plagas)).

The University of Connecticut's IPM program educates agricultural producers, green-industry professionals, and the public about environmentally sound, sustainable, science-based approaches to pest management.

The Sustainable Landscapes program includes extension education related to school IPM, turfgrass management, healthy sustainable landscapes, pollinators, and invasive species.

### School IPM

UConn school IPM programs provide education to CT school grounds and turfgrass professionals, which supports their care and maintenance of school properties using pesti-



Victoria Wallace moderates a panel of turf and landscape experts at the UConn Extension School IPM Workshop in September 2023 at Old Orchard Hill School in South Windsor, CT.

cide-free management and other IPM protocols.

Management practices by public and private K-8 school grounds and athletic field managers are limited by state legislation. Regulations established by the CT General Assembly in 2009 require the use of IPM methods on high school grounds and athletic fields and IPM tools that do not include EPA-registered pesticides on K-8 school grounds (CT General Assembly, 2009).

Therefore, in CT, K-8 school athletic fields and landscaped areas are maintained without the use of pesticides, and the management practices for the outdoor components of the school environment must continue to be addressed.

Since 2010, thirteen school IPM workshops have been developed and presented at school properties throughout CT to provide hands-on training of school grounds managers on the implementation of IPM practices for the management of athletic fields and school landscapes.

Due to Connecticut state legislation, K-8 school athletic fields and landscaped areas are maintained without the use of pesticides.

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Education for school grounds managers has included:

- Training and use of weather stations for assisting in IPM decision-making
- Use of beneficials and banker plants in school landscapes
- Overseeding practices for pesticide-free athletic fields and community landscapes
- Incorporation of low-input turfgrass cultivars
- Assessment tools for school grounds and athletic fields

An athletic-field-assessment-tool app is in the process of being developed.

Significant publications for the School IPM program include:

- *Best Management Practices for Pesticide-Free, Cool-Season Athletic Fields* ([ipm.cahnر.uconn.edu/best-management-practices-for-pesticide-free-cool-season-athletic-fields/](http://ipm.cahnر.uconn.edu/best-management-practices-for-pesticide-free-cool-season-athletic-fields/))
- *Best Management Practices for Pesticide-Free Connecticut School Landscapes* ([ipm.cahnر.media.uconn.edu/wp-content/uploads/sites/3216/2023/05/UConn-School-Landscapes-Best-Management-Practices.pdf](http://ipm.cahnر.media.uconn.edu/wp-content/uploads/sites/3216/2023/05/UConn-School-Landscapes-Best-Management-Practices.pdf))
- *Athletic Field Assessment Form for School Grounds Managers* ([ipm.cahnر.uconn.edu/wp-content/uploads/sites/3216/2023/03/UConn-Athletic-Field-Assessment-Form.pdf](http://ipm.cahnر.uconn.edu/wp-content/uploads/sites/3216/2023/03/UConn-Athletic-Field-Assessment-Form.pdf))
- *School Grounds Pesticide Regulations* ([ipm.cahnر.uconn.edu/ct\\_pesticide\\_ban\\_schools](http://ipm.cahnر.uconn.edu/ct_pesticide_ban_schools))

More resources are available at [ipm.cahnر.uconn.edu/school-ipm](http://ipm.cahnر.uconn.edu/school-ipm).

## Turf and Landscape

UConn Extension supports turfgrass and landscape professionals in Connecticut with educational programming and recommendations to manage turf and landscape pests that may reduce the quality of commercial and residential landscape properties.

These recommendations support agricultural businesses in the lawn-maintenance and landscape-construction industries, as well as professionals that care for parks, cemeteries, municipal properties, conservation districts, cities, and towns.

UConn Extension and research faculty collaborate with professional associations and state agencies to develop demonstrations, workshops, and conferences. The turfgrass faculty team organizes and hosts the biennial turfgrass field day at the UConn Plant Science Research Facility, hosted most recently on July 25, 2024.

Other activities of the Sustainable Landscapes program include:

- Turf- and weed-management instruction for the UConn custom grounds ornamental and turf short course, a review class for the CT Department of Energy and Envi-

ronmental Protection (CT DEEP) supervisory pesticide applicator license

- Creation of the Turfgrass Academy, a two-day program for municipal grounds and landscape professionals
- Ongoing applied research focused on the evaluation of low-input sustainable turfgrasses as part of the National Turfgrass Evaluation Program ([NTEP.org](http://NTEP.org)) and Alliance for Low Input Sustainable Turf ([A-LISTturf.org](http://A-LISTturf.org)).

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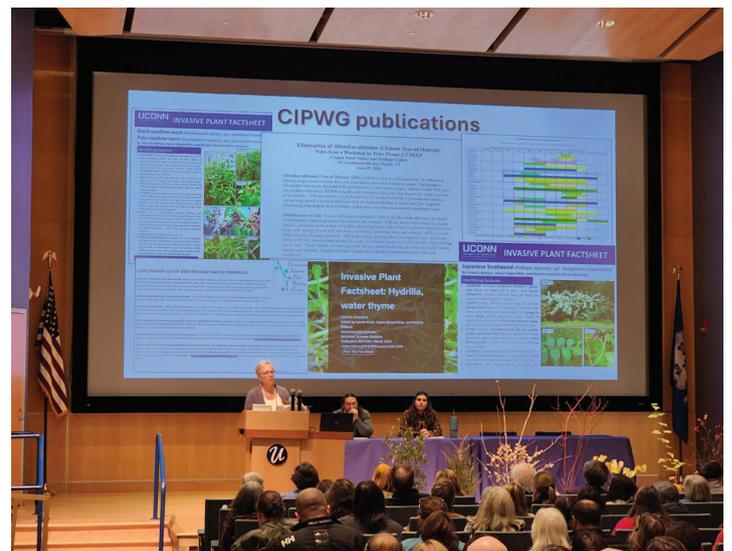
Publications related to these programmatic areas include:

- *Connecticut Native Plant and Sustainable Landscaping Guide* ([ipm.cahnر.uconn.edu/wp-content/uploads/sites/3216/2023/06/UConn-Native-and-Sustainable-Plant-Guide.pdf](http://ipm.cahnر.uconn.edu/wp-content/uploads/sites/3216/2023/06/UConn-Native-and-Sustainable-Plant-Guide.pdf))
- *Mulch Mowing and Leaf Disposal* ([ipm.cahnر.uconn.edu/leaf\\_disposal\\_mulch\\_mowing/](http://ipm.cahnر.uconn.edu/leaf_disposal_mulch_mowing/))
- *Connecticut Native Perennial, Tree, and Shrub Availability List* ([ipm.cahnر.uconn.edu/connecticut-native-perennial-tree-and-shrub-availability-list/](http://ipm.cahnر.uconn.edu/connecticut-native-perennial-tree-and-shrub-availability-list/))

More resources are available at [ipm.cahnر.uconn.edu/turf-landscape](http://ipm.cahnر.uconn.edu/turf-landscape).

## Pollinators

Pollinator education is part of the Turf/Landscape IPM programs and includes a biennial Native Plants and Pollinators Conference featuring current science-based research and infor-



Victoria Wallace speaks at the Connecticut Invasive Plant Working Group's symposium in October 2024, Storrs, CT.

mation on supporting pollinators in managed landscapes.

The conference provides education about pollinator biology and conservation, as well as the incorporation of native plants to create aesthetically pleasing landscapes that support pollinator health. The program includes presentations on plant selection and teaches participants how to optimize conditions to improve pollinator habitat.

UConn Extension collaborated with CT DEEP Wildlife Division to update the *Connecticut Native Perennial, Tree, and Shrub Availability List* ([ipm.cahn.uconn.edu/connecticut-native-perennial-tree-and-shrub-availability-list/](http://ipm.cahn.uconn.edu/connecticut-native-perennial-tree-and-shrub-availability-list/)).

This resource supports the marketing of ecologically beneficial CT specialty crop nursery producers to enhance their economic viability, and it connects consumers with native plants that are important to pollinator health and diversity, as well as cultivating resilient ecosystems.

The Native Plants and Pollinators Conference discusses incorporating native plants to create aesthetically pleasing landscapes that support pollinator health.

In 2022, a small demonstration meadow was established at the UConn Plant Science Research Facility in Storrs, CT, to serve as an educational resource to address questions about meadow establishment and maintenance.

The objective of this project is to evaluate meadow establishment practices, planting methods, and weed-management strategies that are realistic for school grounds managers in contexts where meadows may be incorporated into the school landscape, but where they must be established without the use of herbicide products due to the current legislation.

More resources are available at [ipm.cahn.uconn.edu/pollinators](http://ipm.cahn.uconn.edu/pollinators).

## Invasive Species

UConn invasive species education provides information on the identification of non-native, invasive plants and insects and offers management solutions.

I serve as co-chair of the CT Invasive Plant Working Group (CIPWG), which hosts a biennial invasive plant conference. The most recent symposium was held on October 29, 2024, and featured regional and local experts as well as citizen volunteers sharing practical solutions for invasive-plant management and actions needed to promote native species and improve wildlife habitat.

Symposium information ([cipwg.uconn.edu/2022-symposium/](http://cipwg.uconn.edu/2022-symposium/)) is available on the CIPWG website ([cipwg.uconn.edu](http://cipwg.uconn.edu)).

Currently, there are limited educational programs in Connecticut that help individuals to correctly identify and proactively manage invasive plants. My team and I recently

completed a needs assessment through surveys and focus groups to better understand the needs of CT stakeholders related to invasive plant species. This assessment will help direct future invasive plant education.

UConn Extension has produced a series of invasive plant profile publications ([ipm.cahn.uconn.edu/invasive-species/](http://ipm.cahn.uconn.edu/invasive-species/)), with identification and management recommendations, as well as a jumping worms fact sheet ([ipm.cahn.uconn.edu/jumping\\_worms/](http://ipm.cahn.uconn.edu/jumping_worms/)).

More resources are available at [ipm.cahn.uconn.edu/invasive-species](http://ipm.cahn.uconn.edu/invasive-species) and [cipwg.uconn.edu](http://cipwg.uconn.edu).

## About the Author

Victoria Wallace is the extension educator for sustainable landscapes at the University of Connecticut and the current IPM team leader.

Wallace is recognized as an expert in turf and sustainable landscapes and is a frequent speaker at regional and national programs. She has provided essential school IPM programming and extension support since her tenure at the University of Connecticut began.

She has served as president and board member for the New England Sports Turf Managers Association (NESTMA), the CT Nursery and Landscape Association (CNLA), and others. Through these organizations, she has spearheaded educational symposiums, conferences, and field days.

In 2021, Wallace served as the chair of the committees that developed the national *Best Management Practices for the Sports Field Manager: A Professional Guide for Environmental Sports Field Management* ([www.sportsfieldmanagement.org/knowledge\\_center/bmps/](http://www.sportsfieldmanagement.org/knowledge_center/bmps/)), as well as the chapter document for NESTMA in 2023.

Wallace received the 2024 *Outstanding Achievements in Integrated Pest Management Award* from the Northeastern IPM Center ([neipmc.org/go/ApbM](http://neipmc.org/go/ApbM)) for her impactful work in empowering green-industry professionals to successfully practice IPM.

Wallace teaches an effective and environmentally sound approach to managing pest issues while sustaining optimal plant health. She encourages a proactive, holistic IPM approach that challenges clientele to be innovative and willing to employ multiple tactics.



Victoria Wallace

# Encountering Bed Bugs While Traveling

By Marcia Anderson, PhD, U.S. EPA

**A**s more people travel, there are more instances of bed bug encounters both at home and abroad. Bed bugs are easily transported as people move from place to place.

Experts believe the worldwide increase in bed bugs that hit its stride in the early 2000s may be due to both more travel and ineffective pest-control practices.

Places that we may encounter bed bugs when we travel include hotels, resorts, shore rentals, Airbnbs, cruise ships, or when visiting friends or relatives at their houses or apartments.

## How Do Bed Bugs Spread?

Bed bugs are picked up in places where people congregate, such as in waiting rooms, bus depots, trains, theaters, concert halls, or indoor sports venues.

How many times have you attended parties where all the coats were piled up on a bed? Your clothes can easily pick up bed bugs left on a chair or bed by a previous visitor. Did you know that over a third of the theaters in New York City are regularly inspected and treated for bed bugs? (Nowadays, many treatments are proactive.)

Bed bugs can easily hitchhike on book bags, suitcases, outer garments, and clothes, and they can disperse by moving inside walls from one infested area to an adjoining apartment or hotel room, including via holes around utility lines. And in hotels, multi-family housing, or situations in which large extended families are sharing a residence, the comings and goings of occupants increases opportunities for bed bug introduction and spread.

They are also dispersed when infested items, such as beds and other furniture, are disposed of. They can fall off as items are moved down a hallway, through doors, or in an elevator.

## Before You Travel, Take Precautions

You cannot be certain what may be in the room you are about to inhabit.

When packing, protect your belongings. This may include placing your bags and coats in extra-large zip-top bags to protect them from potential infestation. When traveling, wear simple clothing and avoid wearing pants with cuffs. Light-colored clothing is best for easily detecting the pest.

A few extra items that may prove helpful include: a strong flashlight, a sticky lint roller, a magnifying glass, an extra credit card you can cut, and a few small zip-top bags, all for initial room inspections. Be familiar with what bed bugs look like and consider consulting reputable websites (see “Further Reading” below) before you go. This can help you be prepared.



Close-up of an adult bed bug. Photo: Susannah Krysko.

## First Step: Know What Bed Bugs Look Like

Many small arthropods are easily mistaken for bed bugs. Get a positive ID. Proper identification can save time, anxiety, and money. The *only* way to confirm bed bugs is to find live bed bugs, collect a few, and have a professional identify them.

But having some sense of what to look for can help you narrow down whether you have a potential problem on your hands.

## Upon Entering Your Temporary Residence: Look Before You Leap! Inspect

When possible, consider placing your bags in the bathroom or even in the bathtub when you first arrive, and don't sit down before you inspect. Often, bed bugs are not visible when you first enter a room and do not show themselves until late at night, most often in or around the bed.

Initially, bed bugs are hard to detect in small numbers. Often, people do not realize they had an encounter until weeks later when they notice they have brought bed bugs home with them. By then, they are much harder to control.

*If you think you see something, say something to your host or the hotel manager.*

## More Information on Identifying Bed Bugs

An adult bed bug is mahogany in color. It is between five and seven millimeters in size, about the size of an apple seed and



Bed bugs aggregate in cracks and crevices. Thoroughly inspect the mattress by looking along seams and in other hiding places. Photo: Susannah Krysko.

easily visible to the naked eye.

They are wingless—they do not fly or jump, but they use their six legs to scurry quickly across surfaces.

Their tiny, one-to-two-millimeter eggs are often glued to rough surfaces. Then, there are five juvenile stages called instars. They shed their skin after a blood meal.

### Typical Bed Bug Behavior

Bed bugs aggregate in cracks and crevices during the day, then they will travel 15 to 25 feet or more from their hiding places, up onto your bed, have a meal, then scurry back.

Adult bed bugs can easily survive three to four months without feeding and sometimes longer, depending on temperature and climate. They are attracted to your body temperature and are activated by your exhaled carbon dioxide, especially when you are stationary for long periods of time, like lying in bed, sleeping, reading, or watching TV.

A common myth is that bed bugs are active *only* at night. While they prefer darkness, they will come out at any time if they haven't eaten for a few weeks. In offices, homes, theaters,

or reception areas, they can hide in plush couches and chairs and survive by getting their blood meal during the day. Bed bugs will come out of hiding to feed when they are hungry (usually once a week), and then return to their hiding spots. So, keeping the light on at night won't deter them.

It's crucial to understand that bed bugs are not a sign of sanitation issues. They're after one thing: blood. You get bed bugs by exposure and encountering a source of them.

### Inspecting Your Room

Did you know that over 70 percent of bed bugs are located in bed-related areas? For a thorough mattress inspection: look along the top and bottom seams and along the mattress piping. Most hotels change the sheets frequently, so there's no need to inspect those. Check out the head side of the mattress and slide it over to look at the box spring.

You can use a flashlight and magnifying glass (mobile phones may suffice) to inspect under the mattress handles, along or inside air holes, and under buttons and labels.

What about headboards and bed frames? Bed bugs will hide in crevices on wood, metal, and plastic frames, or where the mattress touches the frame. Use a credit card or your room key card to scrape behind headboards that are attached to the wall.

For plush furniture, look at chair and couch legs. Inspect pillows and cushions, particularly the seams, folds around zippers, and the edges of cushions. Pay attention to staples, tacks, and buttons.

### Oh My, I Found a Bed Bug in My Room! Capturing the Evidence

The shock of a bed bug encounter is never easy to cope with. Once a bed bug is found, it is important to seek help and be open about the problem.

On a recent trip, I did not find any bed bugs when I first entered my room and inspected the bed area. I left my bags in the bathroom, went out to dinner, then returned later to watch TV and settle into bed.

Out of the corner of my eye, I saw a small dark spot move quickly across my pillow. "Oh no!" I thought, "I think I found a bed bug!"

I had to move quickly. I grabbed my sticky lint roller and a zip-top bag. I rolled the lint roller over the bug, then ripped off the sticky paper sheet and placed it into the bag and sealed it. I caught eight bugs that evening.

I called the front desk and reported that there were bed bugs in my room. The night manager did not seem to believe me and stated that there weren't any bed bugs in the resort, but I had the physical evidence to prove otherwise. Still in my PJs,

## Bed Bugs

Continued from Page 5

I showed him my evidence and asked to be moved to another room, and *not* next door. He apologized, took the evidence bag, and moved me to another room.

Is it always possible to change rooms where you are staying? Sometimes, it is not.

Visiting a friend or relative and telling them that their home has bed bugs can be difficult. Aside from providing the evidence, you can help them and yourself by pointing out some signs of bed bugs and ways to control the situation.



Signs of bed bugs include dark and rusty colored droppings, shed skins, voided material, and blood stains from crushed bugs. Photo: Susannah Krysko.

### Signs of Bed Bugs

Typical signs include dark and rusty colored droppings, shed skins, voided material, and blood stains from crushed bugs. Eggs and eggshells, although very small, will be found among droppings or in crevices where adults hide.

Other common pests such as scabies, chiggers, fleas, or mites will not produce the same telltale signs on sheets or linens. You can also detect a sweet, musty odor from the bed bug scent glands when infestations are severe (smells like coriander).

### I Think I May Have Bed Bug Bites. Now What?

Many bites that occur while traveling are from a variety of pests such as fleas, mites, lice, carpet beetles, no-see-ums, mosquitoes, or other biting pests. These are often confused with bites from bed bugs.

*Professionals cannot definitively identify bed bug infestations by the bites alone.* The best way to be sure what has bitten you is to find what has bitten you, collect it, and have it identified.

Common medical issues associated with bed bugs include multiple itchy bites and inflammation, secondary skin infection, a minor potential for anemia from blood loss, stress, anxiety, sleeplessness, and the potential for overexposure to pesticides due to misuse.

However, bed bugs have not been shown to vector diseases, despite their evolution as a blood-feeding pest of humans.

The anticoagulant/anesthetic saliva that bed bugs inject into the body can cause varying degrees of inflammation. For many people, the bites go unnoticed, but for some, the bites can be extremely itchy. Not everyone reacts the same way, and a person's reaction may change over time.

### How Do I Avoid Bringing Bed Bugs Back Home?

If you have been exposed to bed bugs, at the end of the day, place all your outer clothes in a plastic bag. Seal it tightly. Inspect other clothing and the bottom of your shoes before entering your vehicle. Place the shoes you wore in a sealable bag and do not open at home until you are ready to wash/dry or treat them. Check the leg seams of your pants, cuffs, and belt area for any signs of bed bugs. Use a sticky lint roller on your pants after exposure, just in case.

Before you return home, do some laundry if possible. If not, do it as soon as you get home. Laundering clothes is probably the easiest bed bug control method.

While washing in warm, soapy water is effective against most of the bugs, it may

not help with the eggs. The use of a dryer is the best insurance against bed bug introduction into a residence.

In fact, you could forgo the washer entirely and just use the dryer on high heat for 30 minutes because heat is an excellent bed bug killer. Clothing, curtains, linens, small rugs, pillows, and stuffed toys can also be tumbled in a dryer set on high for 30 minutes. (See [www.epa.gov/ipm/avoid-bed-bugs-laundromat](http://www.epa.gov/ipm/avoid-bed-bugs-laundromat))

Note: Bagging items keeps the possibly infested items separate from the clean ones. Do *not* mix newly dried clothes with undried ones and ensure that any cloth laundry bags used have also been dried. Used plastic bags should be thrown away.

### Visiting Relatives and Friends

My aunt invited me to stay with her as I planned a trip near her



Do laundry *before* you return home if possible. Photo: Susannah Krysko.

town. She is elderly and has some physical challenges, and her eyesight has deteriorated over the years. The room she often uses was full of clutter, as she has a hard time discarding old, used household items.

The evening after my arrival, I discovered bed bugs had taken up residence with her. She had no idea she had an infestation. She had complained of some itchy bites, but figured they had come from a pest that her cat might have brought in. She had not even considered the possibility of bed bugs.

If a few bed bugs become established in such a situation, it is likely that an infestation will develop without someone's knowledge. Travelers, relatives, and service workers may inadvertently bring bed bug hitchhikers from their previous locations and a cluttered home makes it challenging to locate the bugs.

Her unused spare bedroom did not have bed bugs yet, but with me sleeping there, that would soon change. So, in the short time I would be visiting, how could I help her?

Although we may not be able to prevent bed bugs from being brought into a home, there is the possibility of containing them once they arrive. Clutter is a bed bug's best friend. With many places to hide, bed bug population growth is practically guaranteed, and some may survive even the most aggressive treatment. When helping someone who has bed bugs taking advantage of a clutter situation, contain non-essential or rarely used belongings in clear, plastic containers and place in a storage room.

When helping friends or relatives in similar situations, the importance of vacuuming mattresses, beds, and other harborage cannot be overstated. It is an effective control method in combination with others, especially when the infestation is light to moderate. Suggest a regular vacuum regimen, especially under beds, in closets, and in corners.

Vacuuming not only removes the bugs but also cleans up shed skins. Studies have shown that bed bugs are attracted to other bed bugs and their shed skins. Use a crack-and-crevice tool to dislodge eggs from tight spaces, then suck them up. Immediately seal and dispose of the vacuum bag; otherwise, the bugs will just crawl out again. Empty bagless vacuums into the garbage outside.

Isolate the bed by pulling it away from walls and other furniture. Obtain physical barriers such as mattress encasements and interceptor traps (commercially available), which are important for detection and control.

Place each bed leg in an interceptor/monitor. For beds without legs, square interceptors that sit next to the bed are available.

Some monitors are sold with scent or carbon dioxide lures or attractants that will catch even more bed bugs. Monitors with scent lures will provide one to two months of enhanced attraction and capture.

For best control, interceptor monitors should be placed under all furniture legs, including beds, sofas, and upholstered chairs. If bed bugs are only in or around a bed, the infestation is most likely light to moderate.

### Further Reading

- EPA Bed Bug Information Clearinghouse: [www.epa.gov/bedbugs/bed-bug-information-clearinghouse](http://www.epa.gov/bedbugs/bed-bug-information-clearinghouse)
- StopPests in Housing Program (a national program administered by the Northeastern Integrated Pest Management Center): [www.stoppests.org](http://www.stoppests.org)



Use a crack-and-crevice tool to dislodge eggs from tight spaces, then suck them up. Photo: Susannah Krysko.



A bed bug interceptor under a bed leg. Photo: Susannah Krysko.

## CABI: Partners in IPM

**F**ood security is at the heart of why integrated pest management (IPM) matters.

Although IPM has a critical role to play in many contexts—including residential and commercial structural settings—one of the main reasons it's critical to develop and deploy effective and sustainable means of managing pests is the havoc they can wreak on the food supply. This is especially true of invasive species, which have little in the way of natural enemies in their novel environments.

Organizations that specialize in IPM, like the regional IPM centers and state IPM programs, partner with numerous other organizations with related or overlapping purviews to achieve our shared goals.

One such organization is CABI, an international, intergovernmental, not-for-profit whose mission includes “improving people’s lives worldwide by providing information and applying scientific expertise to solve problems in agriculture and the environment.” ([www.cabi.org/about-cabi/](http://www.cabi.org/about-cabi/))

IPM organizations partner with numerous other organizations with related or overlapping purviews. One such example is CABI.

CABI currently includes 48 member countries and recognizes that we have the tools to take on global issues such as hunger

and poverty, but in order to achieve meaningful results and improve lives, the relevant expertise needs to be applied where it is needed most.

CABI seeks to accomplish this by sharing knowledge and science-based methods to help farmers grow more and lose less of what they do grow, whether those losses are at the hands of pests, diseases, or insufficient dissemination of critical knowledge.

CABI maintains extensive online resources, including:

- **CABI BioProtection Portal** ([bioprotectionportal.com](http://bioprotectionportal.com)), a searchable database that includes biopesticides and biocontrol agents.
- **CABI Digital Library** ([www.cabidigitallibrary.org](http://www.cabidigitallibrary.org)), hosting millions of research records across agriculture, the environment, human health, and applied life sciences to support study, research, and practical applications around the world.
- **CABI Academy** ([www.cabi.org/products-and-services/academy/](http://www.cabi.org/products-and-services/academy/)), which brings together CABI's expertise in crop health, agricultural advisory services, and digital development to create a range of online training courses and certifications that develop and build plant-health skills.

Learn more about CABI at: [www.cabi.org](http://www.cabi.org)

## Save the Date: 11th International IPM Symposium

**Last discounted registration tier closes January 15; hotel block available until January 28**

**S**ave the date for the *11th International IPM Symposium: Pest Management in Changing Environments*, to be held March 3–6, 2025, at Paradise Point in San Diego, California.

The symposium is the premier global event for presenting and learning about the latest research and strategies for effectively managing pests. Participants have typically included academics (including research, extension, and teaching), private and government scientists, industry professionals, policymakers, and students, among others.

Ismahane Elouafi has been confirmed as keynote speaker. Elouafi is executive managing director of CGIAR, a global agricultural and food systems research network.

**The deadline for early bird discounted registration is January 15, 2025, with special rate categories, including for students.**

Although full-price registration will remain available until the symposium, **please note that the hotel block will be held only until January 28.** After that, rate and room type will be subject to availability.

An ongoing webinar series has been scheduled leading up to the event, with recordings of previous webinars available to view online.

The symposium will feature a broad range of sessions, exhibits, field trips, and award presentations. The vision for the *11th International IPM Symposium* is to bring together top IPM professionals from industry and academia in agriculture, public health, built environments, landscape, and forest/conservation.

For more information, to register for the symposium or view the webinars, or to sign up for email updates, visit [ipmsymposium.org/2025/](http://ipmsymposium.org/2025/).



**Northeastern  
IPM  
Center**

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