School & Home Integrated Pest Management (IPM) Newsletter: February 2025

THE UNIVERSITY OF ARIZONA
Agriculture, Life & Veterinary Sciences & Cooperative Extension

Please consider distributing this newsletter to others.

We want to hear from you!

Please take this short 5-question survey about our newsletter:

https://uarizona.co1.qualtrics.com/jfe/form/SV_cMhZ82JodDKJgCa

Pesticide Safety Education

Shaku Nair, Dawn H. Gouge, Shujuan Li
University of Arizona

February is National Pesticide Safety Education Month!

What is a pesticide?

According to the law, a pesticide is any substance "intended for preventing, destroying, repelling, or mitigating any pest." The term “pest” may refer to unwanted or harmful insects and other arthropods, microorganisms, plants, birds or other animals.

It is important to realize that despite several misconceptions about pesticides, they can be important tools in a pest management plan. It is important to remember that not all pesticides are chemical in nature and often pests can be effectively managed using non-chemical methods.

How to identify a pesticide?

To identify pesticide products, look for key pieces of information on the label (Figure 1), such as:

1. **Pesticidal Claim** - A statement about what the product is designed to kill or repel. Example: the label says 'Kills 99.9% of germs, kills bacteria and viruses'.
2. **Federal Warning** - The federal 'Keep Out of Reach of Children' warning means children under 18 may not use, have access to, or be exposed to pesticides.
3. **Environmental Protection Agency, or EPA, Registration Number** - This means the product has been reviewed by the EPA and is legally registered as a pesticide.

Figure 1. Before using a pesticide, always look for key pieces of information on the pesticide label. Photo: Melissa Scherr, Oregon Department of Agriculture.

There are many different **types of pesticides**; each is meant to be effective against specific pests. Some examples include:

- **Algaecides** to kill and/or slowing the growth of algae.
- **Antimicrobials** to control germs and microbes such as bacteria and viruses.
- **Disinfectants** to control germs and microbes such as bacteria and viruses.
- **Fungicides** to control fungal problems like molds, mildew, and certain plant pathogens.
- **Herbicides** to kill or inhibit the growth of unwanted plants, also known as weeds.
- **Insecticides** to control insects.
- **Insect Growth Regulators** to disrupt the growth and reproduction of insects.
- **Insect Repellents** that prevent mosquitoes and ticks from biting.
- **Rodenticides** to kills rodents like mice, rats, and gophers.
- **Vertebrate contraceptives** to reduce reproduction of certain birds and mammals.
- **Wood Preservatives** to make wood resistant to insects, fungus and other pests.

Read more about different types of pesticides here: https://www.epa.gov/safepestcontrol/why-we-use-pesticides

The most sensible, economical and sustainable method of pest management in any situation is **integrated pest management** or **IPM**.

What is IPM?

"IPM is an ecologically-based pest management strategy that provides long-term management of pest problems with minimum impact on human health, the environment and non-target organisms." **– Arizona Pest Management Center.** https://acis.cals.arizona.edu/about-us/arizona-pest-management-center

The Arizona Pest Management Center (APMC) is a multidisciplinary organization within the University of Arizona that represents, organizes and streamlines faculty pest management research and outreach. The APMC facilitates and supports efforts to develop and deliver outstanding Integrated Pest Management (IPM) programs that address the needs of Arizona's citizens. This includes IPM programs serving agriculture, urban communities and natural areas.

The APMC engages with faculty, partner organizations, clientele and other interested stakeholders to:

- Identify pest management needs and priorities in Arizona.
- Promote partnerships focused on addressing pest management priorities in Arizona and the West.
- Identify and secure funding to support research and outreach programs aimed at addressing pest management needs.
- Evaluate and improve IPM programs and assess their impact on end-users and the environment.
- Enhance communication among all IPM stakeholders, including UA faculty, state partners, clientele groups, the Western IPM Center and federal IPM programs.

One of the greatest causes of pesticide exposure to humans is the use of pesticides in and around the home. Consumers can buy a wide variety of "off the shelf" or "over-the-counter" pesticide products to control weeds, unwanted insects, and other pests. No special training is required before homeowners can use these pesticides in their homes or gardens. Yet, many of the products can be hazardous to people if they are stored, handled, applied, or disposed of improperly. Therefore, it is extremely important to practice safety when using pesticides so you can reduce risks of exposure to yourself, other people and the environment.

The basic steps in reducing pesticide risks are:

- Choosing the right pesticide product for the area and the pest you want to treat.
- Reading and following the product label.
- Determining the right amount to purchase and use.
- Using the product safely and correctly.
- Storing and disposing of pesticides properly.

The EPA publication "Citizen's Guide to Pest Control and Pesticide Safety" available here (https://www.epa.gov/sites/default/files/2017-08/documents/citizens_guide_to_pest_control_and_pesticide_safety.pdf) is designed to help answer citizen's questions about pest control and pesticide safety and more.

The booklet provides information on how to control pests without risking your family's health and without harming the environment. The major goals of this booklet are to help you understand

- What steps to take to control pests in and around your home.
- Alternatives pest control measures such as pest prevention and non-chemical pest control methods.
- How to choose pesticides and how to use, store, and dispose of them safely.
- How to reduce your exposure when other people use pesticides.
- How to choose a pest control company.
- What to do if someone is exposed to a pesticide.

Pesticide Poisoning

Tens of thousands of pesticide poisonings are reported each year. Following a few simple steps can prevent many of these accidents. An EPA survey showed that almost half (47%) of households with young children and 75% of homes without young children had pesticides stored in unlocked cabinets within reach of children. Following a few simples steps, such as those outline below, can help prevent many of these accidents.

Pesticide Poisoning Prevention Tips from NPIC

The National Pesticide Information Center (NPIC) provides objective, science-based information about pesticides and pesticide-related topics to enable people to make informed decisions about pesticides and their use.
The Center operates through a cooperative agreement between Oregon State University and the U.S. Environmental Protection Agency. The NPIC website http://npic.orst.edu/about.html provides a variety of useful pesticide safety-related information, such as the pesticide poisoning prevention tips listed below.

Figure 2: Store pesticides in locked cabinets. Photo: Adobe Stock Images.

- Store pesticides in locked cabinets, out of the reach of children and pets (Figure 2).
- Read the entire label before using any pesticide in or around the home and follow all label directions.
- Read the label's precautionary statements and safety measures so that you are prepared in the event an accident occurs.
- Keep children and pets away from pesticides, pesticide containers, and areas being treated with pesticides. Make sure the product containers are safely out of reach while they are being applied.
- Close pesticide containers immediately after their use to avoid accidental spills.
- Never mix or store pesticides in food or drink containers.
- Be prepared by having a pesticide emergency plan or card on hand, or programming the number for the Poison Control Center (800-222-1222) in your phone.
- If you have questions about this, or any pesticide-related topic, please call NPIC at 800-858-7378 (8:00am - 12:00pm PST), or email the center at npic@ace.orst.edu.

Pesticide Safety Tips from the EPA

The **Environmental Protection Agency** (**EPA**) is an independent executive agency of the United States federal government tasked with environmental protection matters and is charged with ensuring that pesticides do not pose unreasonable risks to the public and to the environment. The EPA regulates the use of pesticides under the authority of two laws—the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug and Cosmetic Act (FFDCA). Most pesticides may legally be sold in the United States if they have been "registered" by EPA and if they bear an EPA registration number. Federal pesticide registration, however, is only the first step in preventing pesticide risks. Just as important are the steps that consumers take to control pests and use pesticides safely, such as:

- The most effective way to reduce risks posed by pesticides is to use non-chemical control methods to reduce or eliminate pest problems. Around homes and schools, such measures include removing sources of food and water (for example, by repairing leaky pipes) and destroying pest shelters and breeding sites (such as removing indoor clutter, outdoor litter and plant debris).
- If you decide you need to use pesticides, always read the label first and follow the directions to the letter, including all precautions and restrictions.
- Don't use products for pests that are not listed on the label and don't use more pesticide than the amount prescribed by the label. Don't think that twice the amount will do twice the job.
- Use protective measures when handling pesticides as directed by the label (Figure 3), such as wearing impermeable gloves, long pants, and long-sleeved shirts. Change clothes and wash your hands immediately after applying pesticides.

Figure 3: Always use at least the minimum recommended personal protective equipment (PPE) when handling or applying pesticides. Photo: Adobe Stock Images.

- Before applying a pesticide (indoors or outdoors), move children, their toys, and pets from the area and keep them away until the pesticide has dried or as recommended by the label.
- Don't spray outdoors on windy or rainy days. Take precautions to keep the pesticide from drifting or running off into the vegetable garden, pool, or neighbor's yard.
- Remove food, including pet food from the area, during indoor applications.
- If using a commercial applicator or lawn care service, ask for information about potential risks and safety precautions to take.

- Don't buy more pesticides than you will need. If you have leftover pesticides, check with your local government or waste management agency to determine whether your community has a household hazardous waste collection program or other program for disposing of pesticides. If no community program exists, follow label directions and any state or local regulations regarding disposal.
- Keep the telephone number of your area Poison Control Center near your telephone: 1- 800-222-1222.

The EPA provides a pesticide poison prevention checklist “Poison-proof Your Home: One Room at a Time”. Access the checklist here: https://www.epa.gov/sites/default/files/2015-10/documents/roombyroom-checklist.pdf

Back by Popular Demand – The AZDA Unusable Pesticide Disposal Events

The Arizona Department of Agriculture (AZDA) is happy to bring back the highly popular “Unusable Pesticide Disposal Events.”

In Fall 2024, the AZDA offered two events – one in Yuma and another in Maricopa. Due to the success of the program, the AZDA will continue to offer this valuable service each year.

Through the event, agricultural community members and structural pest management professionals can dispose of their unusable pesticide products for free. It provides an opportunity for people to dispose of cancelled products and those creating pesticide resistance concerns; as well as expired, ineffective, damaged or contaminated pesticides.

People who hold pesticide credentials, such as structural or agricultural certifications, Pest Control Advisor licenses and grower's permits, will receive email notices in the spring or early summer as a reminder to register for the fall event.

Now is a great time to

- Check the email address the AZDA has on file for you, to make sure it is current, active, and regularly monitored.
- Enter "azda.gov" onto your safe sender list to prevent your spam filter from blocking the notices.
- Be proactive by registering for the event and sending a list of your unusable pesticide products early.

Preregistration using the department's new and improved excel form is required. The new forms are straightforward; however, the AZDA encourages people to review the two-page instructions sheet before completing the form. It includes a list of acceptable and unacceptable materials; tips for securing loads; and suggestions for listing unknown pesticides and estimating product amounts in partially filled containers.

After the AZDA receives the information, the department will prepare a total list of products for the contracted disposal company. This will enable the company to prepare for the event and arrive with the appropriate items, equipment, and PPE.

The form and a two-page instructions sheet are now available on the AZDA "Download Forms" page. Open https://agriculture.az.gov/download-forms and scroll down the list until you find the following two downloadable items.

- Unusable Pesticide Disposal Event Registration (scrollable excel sheet)
- Unusable Pesticide Disposal Event Registration – Instructions (pdf)

If you have additional questions about the Unusable Pesticide Disposal Event, contact Shella Merle at the Arizona Department of Agriculture. Shella can be reached by email, smerle@azda.gov and phone (602) 542-3579.

Please help spread the word about this program by sharing this article through your listservs, newsletters, and social media pages serving the agricultural and/or structural pest management communities.

The EPA recommends and promotes integrated pest management (IPM) in schools, to reduce pesticide risk and exposure to children.

For more information on school IPM read: https://www.epa.gov/schools

---

Citrus Greening Confirmed in Arizona!

Figure 4: Citrus fruit showing symptoms of citrus greening (left), and Asian citrus psyllids on a citrus plant (right). Photo: USDA-APHIS.

On Jan 28th 2025, the AZ Department of Ag (AZDA) issued a news release announcing a Citrus Greening Disease Detection in Nogales, AZ.

Citrus greening disease, or **Huanglongbing** (HLB), is a highly destructive and rapidly spreading bacterial infection affecting citrus trees worldwide. It is primarily transmitted by the **Asian citrus psyllid** (ACP), a small, insect that feeds on citrus leaves and stems. Once a tree is infected, ACP can spread HLB further through its feeding activity (Figure 4).

Citrus is a significant part of Arizona's agriculture industry, with over **$63 million in production value**. Currently, there are approximately **8,000 acres** of citrus production in Arizona. It is also a primary landscaping plant throughout the state. If allowed to expand and establish throughout the state, this disease could devastate the citrus industry.

The **AZDA's Director's order** establishes an internal quarantine for the bacterial Citrus disease Citrus Greening (*Candidatus liberibacter asiaicus*). **Once infected**, most trees will die within a

few years, and **there is no cure**. See the **full Administrative Order here** (02/07/2025). **The hot, dry low desert conditions in Arizona will be a limiting factor helpful in reducing spread of this citrus disease.** However, the **Arizona Department of Agriculture** (AZDA) is working collaboratively with **USDA-APHIS-PPQ**, who will continue to survey Santa Cruz County to determine the extent of the infestation, quarantine, and mitigation measures appropriate for this situation. The AZDA and USDA will contact state and local officials and local communities to provide information to help reduce the further spread of the disease. For more information about this disease and the insect pest that carries it, click **here** or call the **AZDA Tucson Operations Office** at 520) 628-6314.

Some of the information obtained from Florida or other states may not apply to Arizona. Most importantly, the spread of the vector/disease is very slow in arid regions because the warm and dry weather is a natural limiting factor.

Below are two links to help with diagnosing citrus issues.

https://extension.arizona.edu/publication/huanglongbing-citrus

https://extension.arizona.edu/publication/diagnosing-home-citrus-problems

PLEASE INFORM RESIDENTS NOT TO:

- Ship or carry uncertified* citrus fruit, leaves or plants to other states.
- Purchase uncertified* citrus fruit, leaves or plants from other states.
- Bring citrus fruit, leaves or plants with you from other states or countries as you travel.
- Graft citrus budwood or clippings from sources that have not been tested for citrus diseases.

*Fruit, leaves, and plants must undergo specific safeguarding measures and a certificate or permit issued by a regulatory agency to leave or enter the state.

PLEASE ENCOURAGE RESIDENTS TO:

- Purchase citrus fruit locally.
- Purchase citrus plants from a reputable local nursery.
- Share your citrus fruit from your tree with friends and neighbors locally.
- Regularly fertilize your citrus trees as recommended by your local nursery or master gardener to maintain a healthy tree.
- Only take commercially packed citrus fruit out of the quarantine area.
- Never take citrus plants, unclean fruit, or citrus plant parts out of the quarantine area.
- Never ship citrus fruit, plants, or plant parts through the mail (statewide).

Please be aware that the AZDA encourage people to contact their local Master Gardener Program or Department of Agriculture if they believe their tree/s have the Asian citrus psyllid or Citrus greening disease. For more information see attached or go to https://agriculture.az.gov/pestspest-control/agriculture-pests/citrus-pests/asian-citrus-psyllid.

What the Heck Was This? (From our November issue)

Identify the cause of these signs.
Answer: Carpenter ants.

Congratulations to Master Pest Detective

What the Heck is This?

Identify this arthropod.

If you know the answer, email Dawn at dhgouge@arizona.edu. You will not win anything if you are correct, but you will be listed as a **"Master Pest Detective"** in the next newsletter issue.

Upcoming/Ongoing Events

Save the Dates! 8th Arizona School IPM Conference

In-person April 11 and 25, 2025
Online April 29 – May 31, 2025

Please note: The event is not on back-to-back days this year!! The Outdoor track comes first, on April 11th and the Indoor track comes second, on April 25th.

The Arizona School IPM Conference is a great opportunity for continuing education for all institutional staff engaged in operations, maintenance, turf and landscape, food service, health services and more, in schools, childcare, community colleges, public health, medical facilities, city parks and rec, turf and landscape and many other areas.

Conference information https://acis.cals.arizona.edu/community-ipm/events/arizona-school-ipm-conference

Registration links:

In-person https://www.eventbrite.com/e/8th-arizona-school-ipm-conference-in-person-tickets-1269334737369?aff=oddtdtcreator

Online https://www.eventbrite.com/e/8th-arizona-school-ipm-conference-online-tickets-1271509732839?aff=oddtdtcreator

Email nairs@arizona.edu if you have questions.

EPA Webinars about Integrated Pest Management

Upcoming webinar:

Registration: .

View recordings of archived EPA Integrated Pest Management Webinars at https://www.epa.gov/managing-pests-schools/upcoming-integrated-pest-management-webinars.

Weed Science Society of America - Recorded Webinar

Herbicides and the Endangered Species Act: What You Need to Know
This recorded webinar explains the U.S. Environmental Protection Agency's new Herbicide Strategy to protect endangered and threatened species and comply with the federal Endangered Species Act. This link goes to the recorded webinar held November 4, and includes the option to download the presentation slides.

What's Bugging You? First Friday Events ***(New York State IPM Program)***
Fridays | 12:00 pm. – 12:30 p.m. EDT | Zoom | Free but registration required.

In this monthly virtual series, we explore timely topics to help you use integrated pest management (IPM) to avoid pest problems and promote a healthy environment where you live, work, learn and play. What is IPM? It's a wholistic approach that uses different tools and practices to not only reduce pest problems, but to also address the reasons why pests are there in the first place. Each month, our speakers will share practical information about how you can use IPM. **Register for upcoming events.**

What's Bugging You First Friday events are also available in **Spanish**. Individuals interested in these events can find more information on this website: https://cals.cornell.edu/new-york-state-integrated-pest-management/outreach-education/events/whats-bugging-you-webinars/conozca-su-plaga

---

Urban and Community IPM Webinars (Host: University of California)
UC Statewide IPM Program Urban and Community webinar series is held the third Thursday of every month to teach about pest identification, prevention and management around the home and garden. This series is free but advanced registration is required. Dates and topics below, all begin at noon Pacific. https://ucanr.edu/sites/ucipm-community-webinars/

To view previous University of Arizona newsletters, visit:
https://acis.cals.arizona.edu/community-ipm/home-and-school-ipm-newsletters.

Acknowledgements

This material is in part funded by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2021-70006-35385 that provides Extension IPM funding to the University of Arizona. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the views of the U.S. Department of Agriculture or those of other funders.
We respectfully acknowledge the University of Arizona is on the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with Tucson being home to the O'odham and the Yaqui. Committed to diversity and inclusion, the University strives to build sustainable relationships with sovereign Native Nations and Indigenous communities through education offerings, partnerships, and community service.