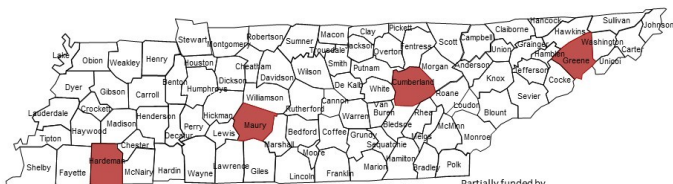




Pests and Pesticides in Child-serving Facilities: An IPM Newsletter

UT Extension Hands-on Bed Bug and Household Pest Training Held in Four Locations Throughout the State

Karen M. Vail, Professor and Extension Urban Entomologist



The four training locations.



Bed bugs, human blood-sucking pests, have resurged in the US and much of the world since 2000. An apartment manager survey we conducted in 2014 indicated that low-income, mid to high rises for the

elderly and disabled were experiencing the highest bed bug infestation rates. For five years, our bed bug research has focused on early detection of bed bugs in these environments. We created this training, which was held across the state from February 26—March 1, 2019, to share our experiences from inspecting Tennessee’s low-income high rises with the goal of transferring much of our knowledge and lessons learned to attendees so they could better serve their clientele. The training was initially developed with the county Extension agents in mind, but later was expanded to include camp, hospitality, housing, pest management and school personnel. For the morning’s training session, we discussed bed bug management



Attendees at the Greeneville location.



Using specimen displays to solve problems.

and shared our experiences from inspecting Tennessee’s high rises. The morning session concluded with a hands-on inspection of beds at each facility. In the afternoon, we divided the audience into small groups of various stakeholders, presented nine bed bug or household pest problem scenarios and asked them to solve the problems. Preserved specimens and images of and/or damage caused by household and wood-destroying organisms were displayed around the perimeter of the room so groups could use these to help solve problems. It was a rewarding day for all!

Special Points of Interest

School personnel should contact Karen Vail (kvail@utk.edu) or Jennifer Chandler (jchand11@utk.edu) to schedule a regional bed bug meeting or to request participation in next year’s school IPM demos.

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Fire Ant Treatments—Should Your School be Next?

Karen M. Vail

As we were inspecting Sweetwater Elementary at the start of the school IPM demonstration we noted fire ant mounds in the playground and other areas. Fire ants are stinging insects that readily respond to mound disturbance to attack and typically cause a painful sting, but may cause a more severe response such as anaphylactic shock in a small percentage of a population. In an effort to reduce the fire ant population surrounding the school, a fire ant bait, Extinguish Plus (containing hydramethylnon and methoprene) was broadcast around the school. Fire ant baits are most effective when broadcast between 70 and 90 degrees F. Jennifer Chandler and Lucas Hietala of our UT Urban IPM Team supervised the July application made by Greg Austin and Jonathan Rhea of Monroe County Extension. We easily divided the school grounds into manageable units and through the use of Google Earth obtained an approximate size of each area to be treated. Afterwards, but prior to the initiation of the new school year, any surviving mounds were individually treated with a fast-acting bait, Advion Fire Ant Bait (containing indoxacarb). This project was partially funded by the USDA, NIFA, CPPM Extension Implementation Program Grant as part of the school IPM component.

On school grounds in the fire ant infested areas of the state (<http://fireants.utk.edu/resources/updates.html>), it's wise to broadcast bait twice a year usually in late spring and early fall. For more information on treating fire ants around schools, see PB1788 *Managing Fire Ants in and around Tennessee's Schools* (http://schoolipm.utk.edu/documents/manage-fireants-inschools_PB1788.pdf). A list of fire ant products labeled for schools is updated annually in the publication, W649 *Fire Ant Products for Tennessee's Schools By Formulation, Active Ingredient, Application Method and Use Site* (<https://extension.tennessee.edu/publications/Documents/W649.pdf>).

Next year we are seeking four schools to initiate a school IPM demonstration. We prefer these to be in the 66 counties infested with fire ants (<http://fireants.utk.edu/documents/2018IFAQuarantinecountylist.pdf>), so we can demonstrate fire ant bait broadcasting techniques. **If you are in need of a fire ant bait to be broadcast on your schools grounds, please contact us at kvail@utk.edu or jchand11@utk.edu to schedule the initiation of your school IPM demonstration.** The 2019-2020 school year may be our last funded demonstrations so please don't procrastinate.



Use Google Earth to estimate the size of areas needing fire ant treatment.

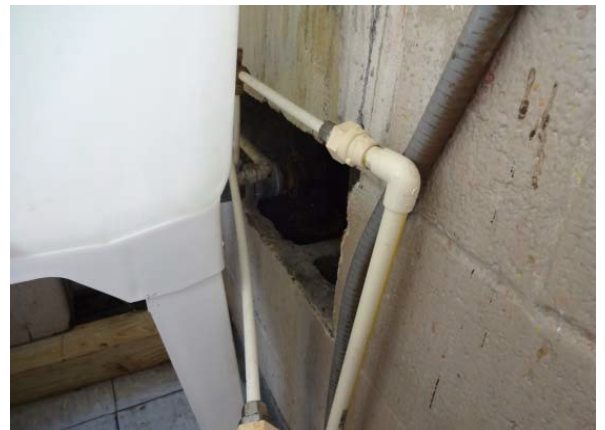
School IPM Roles: The IPM Coordinator, Logbook Overseer, and Maintenance, Custodial and Food Service Staff

To follow up on recommendations of the School IPM Advisory Board, we are including the roles of the school IPM coordinator, logbook overseer, and maintenance, custodial and food service staff in this issue. In recent newsletters, we discussed the importance of the facility director interacting with the school nurses. Although we don't directly discuss the facility director in this article, he/she could serve in several of the roles below, including the IPM coordinator and maintenance staff. What follows has been excerpted from UT Extension PB1846, *A Technician's Guide to Managing Pests in Schools*, which is a supplementary manual to the category 7 certification study material. Anyone applying pesticides in a Tennessee school is required to be certified, that is they must pass the Tennessee Department of Agriculture's category 7 exam, and work under the supervision of a licensed operator.

IPM Coordinator

The IPM Coordinator plays a major role in a school IPM program. Each school district should designate an IPM coordinator. This person is responsible for overseeing most of the day-to-day requirements of the district's program. The IPM Coordinator could be a facilities manager, head custodian, school principal, science teacher or other faculty member, or an individual under contract to the school district. The IPM coordinator establishes the flow of communication within the IPM program and facilitates communication among all members of the school community and the pest management professional (PMP). The duties of the IPM coordinator include:

- Working with district administrators when contracting for pest management to ensure that bid specifications comply with the district's IPM policy and the principles of IPM.
- Serving as the primary contact for the pest management company and PMP (if pest management services are contracted).
- Overseeing the daily operation of the IPM program, maintaining a priority list of structural repairs and evaluating progress in achieving pest management objectives.
- Updating facility occupants and decision makers about progress in implementing the IPM program.
- Ensuring accurate records about the IPM program, including pest sightings; the type, amount, and location of all pesticide treatments; dates of each treatment and other IPM activities; any pesticide-related complaints; and needed sanitation, structural, and landscape improvements are kept.
- Evaluating the effectiveness of any treatments and addressing any shortcomings with the pest management service when a treatment doesn't work as expected.



Large opening in concession stand wall is a harborage for pests as well as entry to travel routes.



Repair to the opening in the concession stand wall. Pipe penetrations as well as the large gap are well sealed.

Overseer of IPM Logbook

In addition to the IPM Coordinator for the school district, each school should appoint someone to oversee the logbook that contains the pest management service records.

Custodial and Building Maintenance Staff

Custodians and maintenance staff have significant roles to play in an IPM program because of their familiarity with the building as well as responsibility for cultural practices inside the structure. Custodial and maintenance personnel often are not trained to recognize conditions that may lead to pest problems. They should participate in training organized by the IPM coordinator.

Custodial staff members are responsible for:

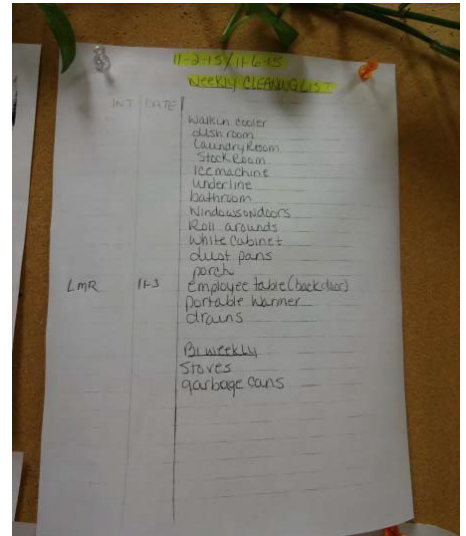
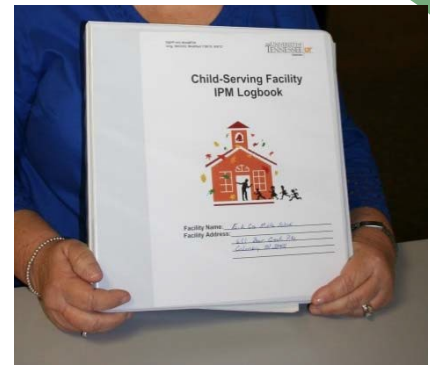
- Reporting incidents and locations of pest problems.
- Recognizing and reporting pest-conducive conditions, such as water leaks, and potential pest entry points into buildings.
- Correcting many of the conditions that may lead to pest problems.

Food Service Staff

Food handling and preparation areas are the most crucial areas for pest management because they provide all the resources (food, water, and shelter) that pests need. It is critical that cafeteria staff understand the importance of good sanitation, kitchen management, and proper food storage. Kitchen and cafeteria staff should also participate in periodic IPM training.

The roles of kitchen and cafeteria staff include:

- Ensuring that food waste is removed daily, that garbage cans are cleaned and lined, that spills are cleaned as soon as possible, that floors are mopped daily with special attention applied to corners and areas under heavy equipment, that grease is removed from surfaces and that food is stored in pest-proof containers.
- Locating dumpsters at least 50 (or 100) feet from the kitchen entrance or as near to this as is practicable.
- Keeping lids and doors to the dumpster closed at all times unless garbage is being transferred to the dumpster. Checking that the drain is plugged.
- Inspecting all deliveries upon arrival for the presence of pests and damage to containers.
- Removing cardboard from storage areas since cockroaches, brown recluse spiders and mice readily use cardboard for harborage.
- Using supplies on a first-in first-out (FIFO) basis reduces the chance that a stored product pest infestation will spread from package to package.
- Cleaning floor drains weekly.
- Deep cleaning food preparation areas at least twice per year. Use of steam cleaners or foaming agents to clean equipment and floors is recommended.
- Assisting the district's IPM staff in locating and eliminating pest harborage areas.
- Keeping a separate pest sighting log in the kitchen because kitchens are often on a different service schedule than the rest of the school.



Weekly cleaning schedule for kitchen.



Date inventory when it arrives.

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For more information about IPM in Tennessee schools and other facilities, or to view past issues of *Pests and Pesticides in Child-serving Facilities*, please visit <http://schoolipm.utk.edu>

NATIONAL IPM INFORMATION

eXtension's Pest Management In and Around Structures: Urban Integrated Pest Management http://www.extension.org/urban_integrated_pest_management

National School IPM
schoolipm.ifas.ufl.edu/

IPM in Schools Texas
<http://schoolipm.tamu.edu/>

IPM Institute of North America
www.ipminstitute.org/

School IPM PMSP—all schools IPM by 2020 <https://ipminstitute.org/projects/school-ipm-2020/>

National Pest Management Association IPM
www.whatisipm.org/

EPA schools
<http://www2.epa.gov/managing-pests-schools>

For further information about the IPM program at your school or in your county, contact your county Extension Agent or the school IPM Coordinator. For county agent contact information, please visit <https://extension.tennessee.edu/Pages/Office-Locations.aspx>

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

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