



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

Pest-Proof Before Cold Weather Drives the Pests Inside!

As temperatures drop in the autumn many pests will try to seek refuge in buildings to protect themselves from the cold. Here are a few suggestions to help seal school buildings so rodents, beetles, spiders and other pests can't get in.

1. Check doors for good seals. If light can be seen around edges, then probably a door sweep, threshold or weather stripping is needed.
2. Seal around pipe, wire and other penetrations into the building.
3. Caulk around windows and doors.
4. Use hardware cloth behind attic, roof and crawlspace vents.
5. Seal holes and cracks in the foundation walls.
6. Repair leaks.
7. Clean leaves and debris from gutters.
8. Downspouts should empty into drain pipes to conduct water away from structure.
9. Move mulch up to 18 inches away from foundation base.
10. Remove debris (firewood, boards and other clutter) from the base of buildings.

For more information, see:

How to Pest-Proof Your Home <http://www.ca.uky.edu/entomology/entfacts/ef641.asp> University of Kentucky Cooperative Extension Service

PB1303 Managing Pests Around the Home <http://www.utextension.utk.edu/publications/pbfiles/pb1303.pdf> UT Extension

IPM Survey Results Are In!

We'd like to thank everyone that took the time to complete the online UT YEAH IPM Survey that was conducted last spring. Below is a short summary of the results.

Percentage of schools rated as using no, low, medium or high levels of IPM in their buildings.

No IPM	Low IPM	Medium IPM	High IPM
15	11	20	54

Percentage of schools rated as using no, low, medium or high levels of IPM on their grounds.

No IPM	Low IPM	Medium IPM	High IPM
72	11	17	0

Only 169 schools, which represents 9.9% of schools and all or part of 6.7% of school districts, responded to this survey. The names of the schools using IPM will be posted on the UT YEAH web site and in future issues of this newsletter.

Special points of interest:

> [Pest Proof!](#)

> [IPM Survey Results Are In!](#)

> [Managing Fire Ants Around Schools](#)

> [Tips for Baiting Fire Ants](#)

> [UT YEAH Contact Information](#)



School personnel brought a black widow spider into the UT Urban IPM Lab for identification. The pest management professional did not think it was a black widow because of the red spots on the upper abdomen.

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Figure 1. Fire ant mounds become more visible in the fall after rains and when vegetation dies back. As temperatures drop, fire ants will move mounds close to heat sinks including sidewalks and buildings. Broadcast a fire ant bait now while temperatures are still between 70 and 90F.



Figure 2. Applying fire ant bait using a herd seeder mounted on an ATV



Figure 3 Using a chest spreader to apply fire ant bait.



Figure 4. Drenching a mound.

Bait Fire Ants Around Schools Now While Temperatures Are Between 70 and 90F

Managing Fire Ants with IPM in and Around Schools

I. Long Term Suppression - Two-step method

A. Step 1. Broadcast Bait Application (see additional references for equipment, baits, techniques, etc.). Use an ATV-mounted or handheld spreader to apply fire ant granular bait to large areas (where mound densities are high) once or twice a year (spring and fall, as long as conditions are appropriate for foraging [see tables]).

Advantages of Broadcasting Baits

Broadcasting baits allows the fire ants from all-sized mounds to pick up the bait and transfer the toxicant back to the colony members including the queen. Small mounds are often overlooked with individual mound treatments. Insect growth regulator (IGR) baits are often slow acting and may require 8 to 12 weeks to reduce populations to acceptable levels, but control may be extended to 6 months. Faster-acting baits can kill colonies from 3 days (Advion) to one to several weeks (AmdroPro, Maxforce, etc.) but reinfestation will usually occur more quickly.

B. Step 2. Individual Mound Treatments (IMT) should be applied to mounds located in high traffic areas 3 - 10 days after broadcasting a bait

1. Fast-acting granular baits (Advion, Amdro, Ascend, etc.) but don't leave bait in piles so it is attractive to kids or
2. Pyrethrin or pyrethroid drench (restrict access to treated area until risk of pesticide exposure is removed)

(Note: You may want to apply treatments on a Friday afternoon after school is dismissed if school is still in session. If mounds are located under slabs, sidewalks and other heat sinks, baits are the best option as long as temperatures are between 70 and 90F. Drenches may not contact parts of the colony that are under these objects. Some schools have chosen to apply a nonbait granular fipronil product called TopChoice. TopChoice usually takes 4 weeks to reduce populations to acceptable levels, but may remain active for a year. Some concerns with using TopChoice are that it is more expensive than bait applications, may have more negative effects on nontarget insects, and leaves a chemical residue where students can contact it for over a year.)

II. Immediate Solutions in Sensitive Areas

A. Indoors

1. Notify pest manager of fire ant infestation.
2. Check premises for ant food sources and remove.
3. Use ant bait in a station* or wipe ant trails with soapy water to kill ants and remove trail pheromone or vacuum to remove existing ants (place vacuum bag in sealed plastic bag and place outside in dumpster).
4. Note where fire ants enter the building and provide this information to the pest manager
5. Seal ant entry point into structure with appropriate crack sealers or caulk.

(*Note: Inside schools, pesticides must be applied by a certified technician under the supervision of a licensed operator)

B. Outdoors

1. Treat fire ant mound with a liquid drench
 - a. botanical insecticide (pyrethrins, d-limonene, etc.) or
 - b. pyrethroid insecticide (bifenthrin, cypermethrin, permethrin, etc.) labeled for a fire ant drench
2. Apply a residual insecticide to the ant entry point into the building and seal the entry point, if possible.
3. Restrict access to pesticide-treated areas until risk of exposure is removed from treated area.

Additional references for spreaders, baits, and other fire ant control information:

Managing Imported Fire Ants in Urban Areas

http://www.extension.org/pages/Managing_Imported_Fire_Ants_in_Urban_Areas_Printable_Version

The Two Step Method for Managing Fire Ants Around Homes and in Neighborhoods

<http://www.utextension.utk.edu/publications/spfiles/sp419.pdf>,

http://www.extension.org/pages/Fire_Ant_Control:_The_Two-Step_Method_and_Other_Approaches

Fire Ants and the Texas IPM School Program

http://fireant.tamu.edu/materials/factsheets_pubs/pdf/FAPFS020.2002rev.pdf

New fipronil products prove popular, but do they fit IPM programs?

http://schoolipm.tamu.edu/Newsletter_upload_files/Newsletter_14.pdf

Fire Ant Products registered in Tennessee

<http://fireants.utk.edu/Webpages/Products.htm>

Imported Fire Ant Websites: <http://fireants.utk.edu> or <http://www.extension.org/fire+ants>

Getting the Most from Fire Ant Baits

- Baits should be applied between 70 and 90 degrees F when maximum fire ant foraging occurs.
- In summer, apply baits in the evening. During the cooler evening, ants will quickly discover and carry off baits. If applied during the day, in extreme heat, baits quickly lose their effectiveness. Also, ants do not forage much during the day when it is too hot (>90 degrees F).
- To see if ants are active, place a small amount of food (hot dog or potato chip) next to a mound. If ants begin removing the food within 30 minutes, it's a good time to treat.
- Use only fresh bait, preferably from an unopened container. Once opened, baits should be used within a few weeks. Unopened containers may stay fresh for up to two years.
- Test baits for freshness before using. Sprinkle a small amount next to an active mound. If the bait is fresh, ants will begin removing it within 30 minutes. If ants do not remove the bait, but feed on the potato chip, then the bait is spoiled.
- Apply baits when no rain or dew is expected for at least five hours. Once the baits become soggy, they are not as attractive to the ants.
- Broadcast the bait, or apply it as directed around, NOT ON, the mound.
- Avoid disturbing the ants right before applying the bait.
- Do not contaminate baits by storing them or applying them with fertilizer or other pesticides.
- Follow the directions on the label. It is against the law to apply baits in areas not listed on the label.

UT YEAH Contact Information:

Karen Vail, Ph.D., Professor,
Urban IPM Specialist, UT Extension
205 Ellington Plant Sciences Bldg.
2431 Joe Johnson Drive
Knoxville, TN 37996-4560
ph: (865) 974-7138
fax: (865) 974-4744
email: kvail@utk.edu
web: http://eppserver.ag.utk.edu/sch_ipm.htm
<http://eppserver.ag.utk.edu/personnel/Vail/vail.htm>



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 eppserver.ag.utk.edu/sch_ipm.htm or utyeah.utk.edu

Martha Keel, Ph.D., Professor
Housing & Environmental Health Specialist,
UT Extension
218 Morgan Hall
ph: (865) 974-8197
fax: (865) 974-5370
email: mkeel@utk.edu
web <http://utyeah.utk.edu>

James P. Parkman, Ph.D.
UTIA IPM Coordinator
205 Ellington Plant Sciences Bldg.
ph: (865) 974-7135
fax: (865) 974-4744
email: jparkman@utk.edu

Mary Rogge, Ph.D., Assc. Professor
UT College of Social Work
225 Henson Hall
ph: (865) 974-7500
fax: (865) 974-4803
email: mrogge@utk.edu

National IPM INFORMATION

National School IPM
schoolipm.ifas.ufl.edu/

IPM in Schools Texas
schoolipm.tamu.edu/resources.htm

IPM Institute of North America
www.ipminstitute.org/

National Pest Management Association
IPM site
www.whatisipm.org/

EPA schools
www.epa.gov/pesticides/ipm/schoolipm/index.html

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 www.agriculture.utk.edu/personnel/districts_counties/default.asp

**Comments or questions on this newsletter?
Contact kvail@utk.edu**

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.

Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.

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