



TN School Integrated Pest Management (IPM)

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UT Youth, Environment and Health (YEAH) Team



Goal

- Improve the well-being of Tennessee's children by **reducing** and **balancing** risks associated with pests, pesticides, and other chemicals

Pesticide
RISK



Pest
RISK





What have been the most frequent and troublesome pests in the past three years? (2002 survey, 36% return).

Pest	% Frequent	% Troublesome
Cockroach*	78	49
Rodents*	44	35
Ants or Fire Ants	42	35
Head Lice	31	35
Brown Recluse Spiders	23	27

*Known asthma trigger

New publication on managing bed bugs in schools at schoolipm.utk.edu

Harmful Effects of Pesticides Caused by Excess Exposure



- **Acute Effects:** Harmful or fatal if swallowed or inhaled.
- **Delayed Effects:** Tumors, cancer, birth defects, blood and nervous system disorders.
- **Allergic Effects:** Asthma and skin, eye and nose irritation.

Children More Susceptible?

- Growing and Developing
- Enzyme detoxification systems not completely developed
- Higher metabolic rates
- Eat, drink and breathe more than adults
- Behaviors
 - Hand-to-mouth activities
 - Close to the ground
 - Spend more time outdoors
 - More active



Tennessee:62-21-124. Pesticides in buildings used for food prep.and service, or lodging

(a) Whether or not engaged in the business of applying pesticides, **a person may not apply a pesticide within any of the following buildings, except under the direct supervision of a person licensed to apply pesticides** in

accordance with this chapter:

- (1) any bldg. used for the preparation or serving of food
- (2) any bldg. used for temp. or perm. lodging
- (3) any bldg. used primarily for educational purposes, except those buildings used primarily for religious purposes or for providing education to not more than 10 persons, &
- (4) any commercial food processing facility.

National School IPM PMSP

Call for all schools in US to be using IPM by 2015

School IPM 2015
Reducing Pest Problems and Pesticide Hazards in Our Nation's Schools

About School IPM News Get Involved Resources

School IPM 2015 Implementation

- Home
- About School IPM
- School IPM 2015 Full Text (2.3 MB)
- Updates
- Get Involved
- Events
- Resources
- Contribute
- Contact Us
- Donate

Regional Working Groups

- North Central
- Northeastern
- Southern
- Western

More School IPM Links & Resources

- University of Florida School IPM Resources
- IPM Standards
- School IPM Headlines
- Building Mgt
- Grounds Mgt
- Other Sensitive Environments
- IPM STAR Certification
- Super Stealth

Awarded Winners Announced for the 2009-2010 Childcare and School IPM Recognition Awards
Tue, 17 Nov 2009 15:35:00 +0000
The award winners for the 2009-2010 Childcare and School IPM Awards have been announced. For a complete listing of honorees, please visit our website...

Bed Bug Workshop in Chicago - December 2nd
Mon, 09 Nov 2009 15:22:00 +0000
Bed bugs have made a huge comeback in hotels, apartments, dorm rooms, and homes. Getting rid of bed bugs is expensive and time consuming. Treating jus...

The 2009-2010 Childcare & School IPM Recognition Awards - Call for Nominations
Mon, 02 Nov 2009 19:26:00 +0000
The 2009-2010 Childcare & School IPM Recognition Awards Call for Nominations. The School IPM 2015 Steering Committee and the North Central, Northeast...

Iowa State University Highlights School IPM
Thu, 22 Oct 2009 19:13:00 +0000
Media correspondents from Iowa State University recently recognized Dr. Mark Shour for his outstanding work with IPM training in Iowa schools and chil...

North Thurston Public Schools Earns IPM STAR Certification
Tue, 20 Oct 2009 14:53:00 +0000
North Thurston Public Schools has earned IPM STAR certification, the highest award available recognizing excellence in reducing pest and pesticide ris...

Facility Masters Webcast: Integrated Pest Management Essentials for Schools ? Oct. 27 @ 12pm EASTERN
Fri, 16 Oct 2009 14:54:00 +0000
All educational professionals want to provide a healthy learning environment that protects students and teachers from the hazards of pests and pest-re...

SCHOOL IPM LISTSERV

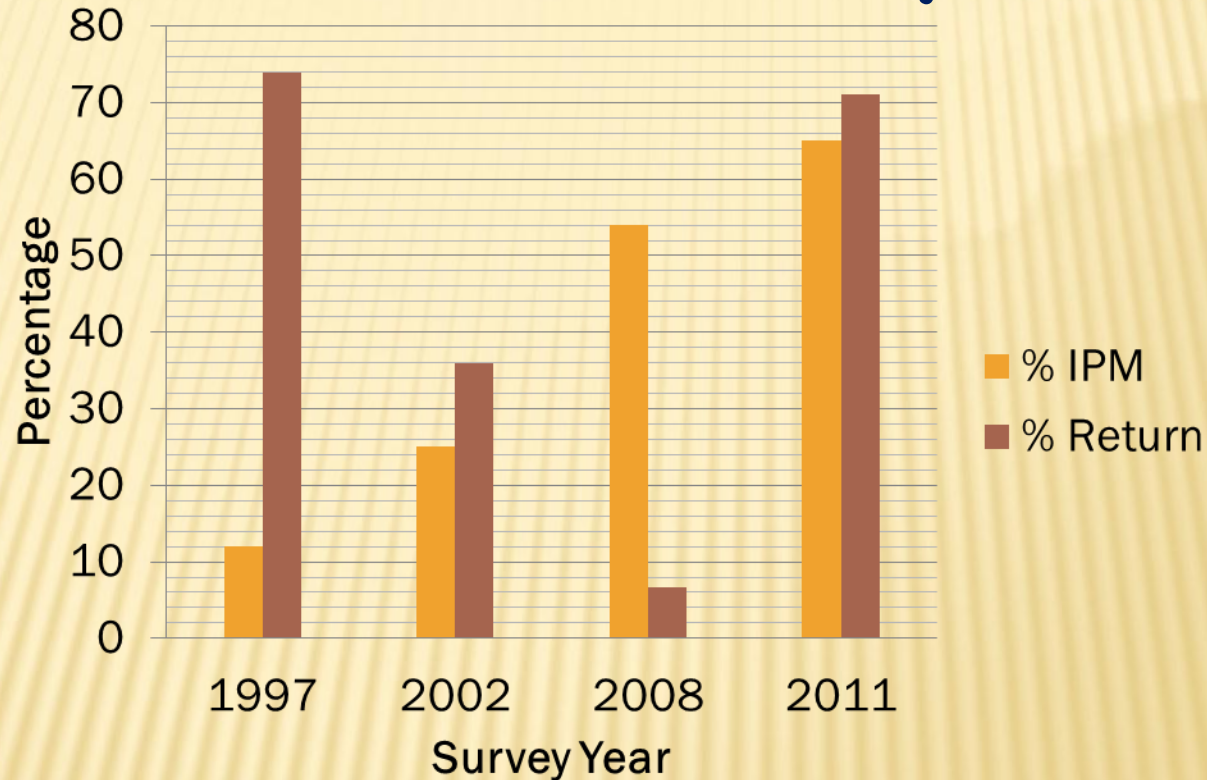
New! School Inspection Tools for Sale
Requires Adobe Reader

More than 15 school IPM projects nationwide are currently funded by:

North Central IPM Center Northeastern IPM Center Southern IPM Center Western IPM Center CSREES EPA
United States Environmental Protection Agency

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Contact us: Last modified: August 6, 2009

TN School IPM Survey Results



% IPM doubling ~every 5 yr, all schools use high level IPM by 2013?

What is
**Integrated Pest
Management (IPM)?**



IPM Definitions



Technically: IPM is a process for achieving long term, environmentally sound pest suppression through the use of a wide variety of technological and management practices.

Simply: IPM controls pests while reducing the hazards of pests and pesticide exposure to humans.

Five Points of IPM



- Prevent pest populations (remove access to food, water and shelter).
- Apply pesticides only as needed or use mechanical control.
- Select the least hazardous pesticides.
- Target pesticides to areas not contacted by or accessible to the students, faculty or staff.
- Communicate!!!!!!

1) Prevent Pest Populations



All plumbing should be in good repair and the pipe penetration sealed.



Proper screening or other devices should be in place around air vents, windows, doors, etc.



Any crack in walls or around plumbing and electrical conduit should be well sealed. Check doors and door sweeps for good seals.



2) Apply Pesticides As Needed or Mechanical Control



Treatment is necessary only when pests are present. Proper inspection procedures result in early detection of pest problems.



Sticky traps are great for monitoring pest infestations. Also, specimens can be collected and properly identified.

3) Select the Least Hazardous Material



Sprays create significant risks to children in schools. When it is necessary to treat, use the safest products that will solve the problem.



Many newly developed products reduce pest populations and have reduced risk to humans.

Use products with a signal word of CAUTION or no signal word.

The higher the LD50, the less toxic.



Category	Signal Word	Oral LD50 mg/kg	Dermal LD50 mg/kg	Oral Lethal Dose ¹
I Highly Toxic	DANGER, POISON skull & crossbone	0 to 50	0 to 200	drops to teaspoon
II Mod. Toxic	WARNING	50 to 500	200 to 2,000	teaspoon to 1 oz
III Slightly Toxic	CAUTION	500 to 5,000	2,000 to 20,000	1 oz. to 1 pt.
IV Relatively Non-toxic		5,000+	20,000 +	1 pint to 1 lb.

4) Target Pesticides Properly



Crack and crevice treatments, such as puffing dusts into wall voids or treating cracks with gel baits, drastically reduce exposure potential.

Targeting exposed surfaces with residual sprays puts pesticides where children and staff may contact them and is not recommended.



5) Communicate



E&FP Info Note#704
Orig. 09/03/02, Modified 12/01/05



Child-Serving Facility IPM Logbook



Facility Name: _____

Facility Address: _____

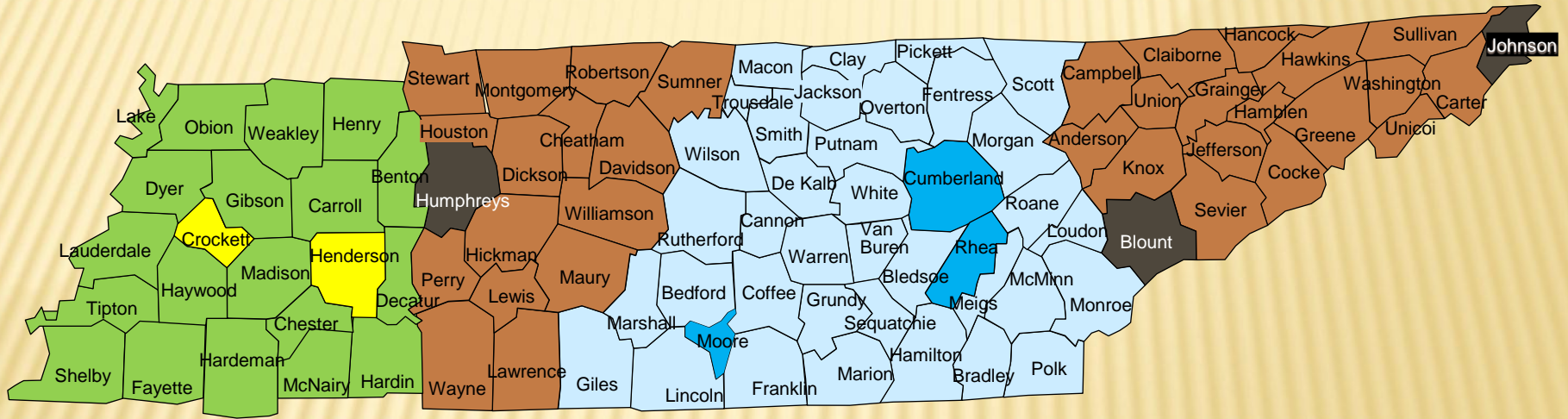
Directions for Using the IPM Logbook

Maintaining a logbook facilitates communication among IPM participants. Good record keeping is essential to smoothly execute and soundly evaluate an IPM program. Interested parties can both record and find information here.

- **Pest sighting log** - Record who sighted the pest(s) and where and when. Be specific in noting the type and number of pest(s) and any damage. For convenience to staff, place an additional log in the kitchen. Be specific; indicate the type, number and any damage that was done. The pest control technician can view the log, investigate the situation and treat or make suggestions to correct conditions that are contributing to the problem. The structural repair log alerts the maintenance staff about needed repairs. Both the pest sighting and the structural repair logs have a place to note what action has been taken and when.
- **Inspection forms** – Prior to the start of school, it is a good practice to inspect the school to see what repairs are needed to correct pest-conducive conditions such as leaky pipes or unsealed pipe penetrations and worn weather stripping. The inspection checklist helps to remind IPM participants that sanitation and exclusion are key to preventing pests.
- **Maps and traps**- Monitoring for pests with sticky traps is a valuable tool for detecting hot spots and for determining the effectiveness of treatments. Replace traps when dusty or full. Dating and numbering traps and recording their location on a map allows anyone to check them and fill in the pest surveillance sheets. Examples of a trap log and facility map are included.
- **Pesticide application records** - State laws require for each application of a pesticide that the name and certification number of the applicator; the name of and the amount of the product applied, the active ingredient and its percentage; the location and time of the application; and the target organism for which the product was applied be recorded. Records must be kept for two years.
- **Time log** - The pest control technician records the time span and date of visits on this log sheet.
- **Labels and MSDS** - This section of the logbook contains copies of all labels and material safety data sheets (MSDS) for the pesticides used by the pest control technician. Anyone having questions about the products can refer to these materials for information.
- **Policy and plans** - IPM policy is a commitment to manage pests using a variety of methods such as sanitation and exclusion and treating only when the pest or evidence of the pest is present. Plans include the thresholds that trigger action and the strategies for pest management. Policies and plans will vary according to the standards each school system chooses to adopt. Examples of policies, plans and pest thresholds can be found at schoolipm.utk.edu.
- **Newsletters and Websites**- Place copies of the UT School IPM newsletter and other appropriate pest management information in this section. Refer to this section for timely information on preventing and controlling pests in the school environment.

<http://schoolipm.utk.edu/documents/logbook2013.pdf>

UT Extension School IPM Demonstrations



- 2009 demos
- 2010 meetings
- 2010 demos
- 2011 meetings
- 2011 demos
- 2012 meetings

★ 2010 demonstration schools were 4 of 24 in nation to win EPA IPM Innovator's Award in 2012

Benefits of IPM



- ✘ Reduced pesticide use.
- ✘ Healthier learning environment for our children.
- ✘ Better long-term control of pests.
- ✘ Reduced liability of school districts.

Getting
STARTED

[Resources](#) [Training](#) [Links](#) [Contact](#)



[Monthly Newsletter](#)

Integrated Pest Management (IPM) aims to **reduce and balance exposure** to pests and pesticides and is a process that extends beyond the application of pesticides to include reduction of food, water, shelter, and in-building access used by pests. In an IPM program, **pest populations are prevented**; pesticides are used only when needed; the least hazardous pesticide that effectively manages the targeted pests is selected; and pesticides are directed to areas not accessible to children, staff, parents or other building occupants.

Children are physiologically more vulnerable to pesticides. Children can spend long hours at school, seven or more hours a day, and up to 12 hours a day at a childcare center, and therefore have an **increased risk of pesticide exposure** if pesticides have been applied in a manner incompatible with integrated pest management (IPM).

What is IPM?

Integrated Pest Management (IPM) is a process for achieving long-term, environmentally sound, pest suppression by using a variety of technologies and management practices.

- Preventing pest populations using such non-chemical methods as sanitation and exclusion practices.
- Applying pesticides only as needed to correct verified problems.
- Selecting the least hazardous methods and materials effective for control of targeted pests.

Schoolipm.utk.edu

Acknowledgements



Some slides modified from :

Clay W. Scherer, University of Florida

Design: Matthew B. Downey, University of Florida This is one of several presentations available at the national School IPM Information Site <http://schoolipm.ifas.ufl.edu>

UT YEAH presentations at <http://utyeah.utk.edu>