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

The 2015 School IPM Survey Results—We're Slipping Slightly!

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Thanks to the 94 school districts' facility directors that took time out of their busy day to complete the 17-question phone pest management survey. We certainly can't complain about the impressive 66% response rate. In the past, I've reported the responses from the school districts for the current year, but this year I'd like to do something different. This year, I'm going to report the current year's data and also look at the trends since 1997.

Most (77%) schools identified their district as rural, while 11% identified themselves as suburban and 19% were identified as urban. Four school districts identified themselves in more than one setting.

Results for the 2015 School Pest Management Survey were a little disappointing as the adjusted percentage of school districts using IPM dropped to 37%, down nine percentage points from two years ago. This is still better than 1997 when we estimated 12% of school districts were using IPM, just not as good as two years ago. The adjusted IPM percentage is calculated by removing school districts that indicated they used IPM but then applied pesticides on a scheduled basis regardless of pest presence or sprayed baseboards. We used the following IPM description during the phone survey:

IPM emphasizes regular inspections, not regular spraying of pesticides, to detect pests. Basic pest survival elements, such as food, water and shelter, are removed and pest access into a building is reduced. Pesticides, if deemed necessary through inspections, target the pest and minimize the risk of exposure to building occupants.

Special Points of Interest

We can easily increase the number of school districts that are using IPM by doing a few simple things: (1) create a policy statement by modifying our online example, (2) stop spraying baseboards as preventive pest control—it's not very effective, (3) bait for cockroaches—it's the preferred method by the world's experts and (4) use the logbook!

This issue

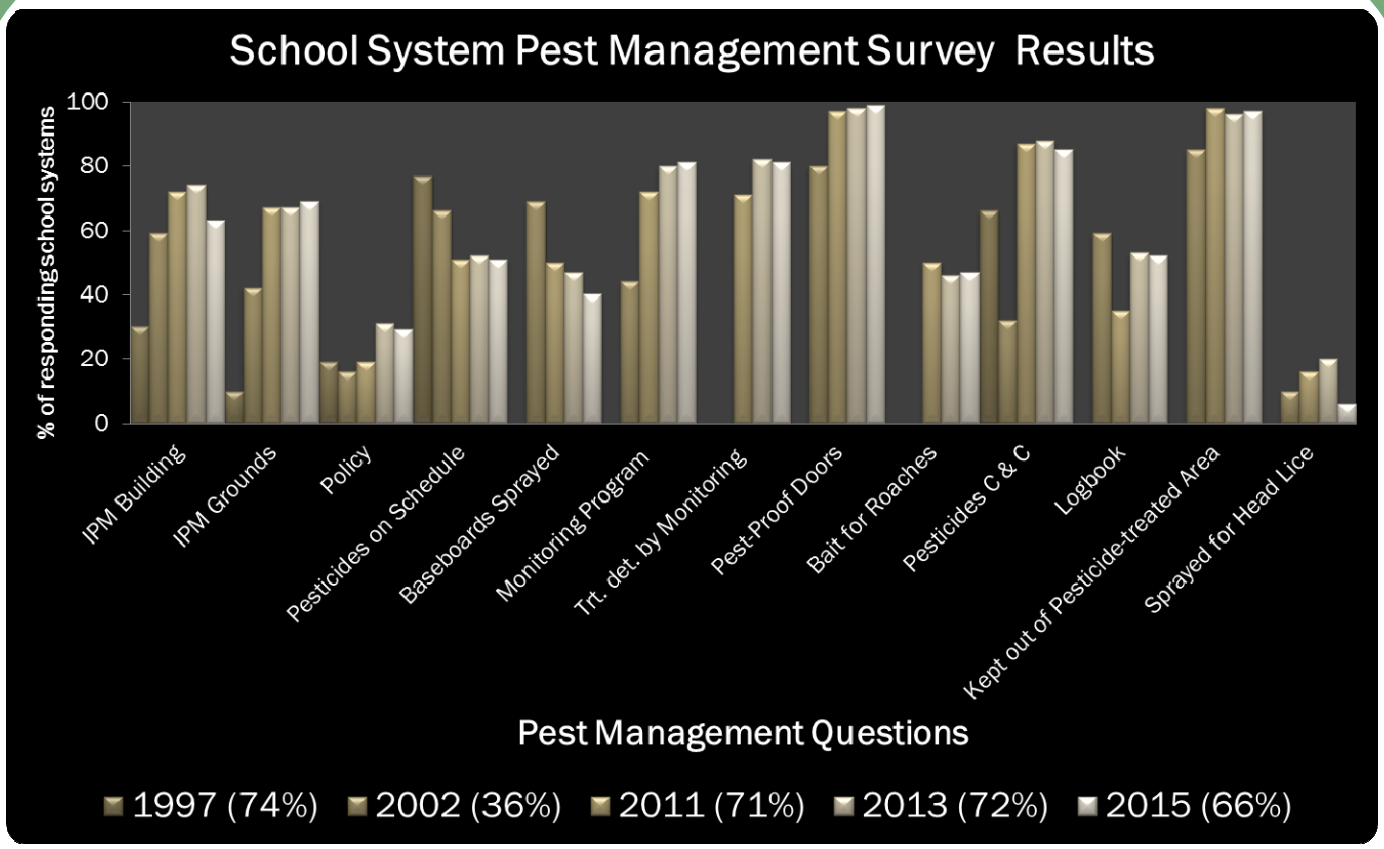

Figure 1. Percentage positive responses from Tennessee school districts for each question asked. The legend indicates the year the survey was conducted with the percentage of school districts responding in parentheses.

This is the first year that we've seen the previously positive trend of increasing IPM adoption go negative, whether using the reported (Figure 1) or the adjusted IPM estimate (http://schoolipm.utk.edu/SchoolIPMsite/wwwroot/School%20Sample%20Site/ipmresu.htm).

Besides the school districts determination of IPM use and our adjustment of that selection, we are still making progress towards the goal of all schools using IPM by 2020.

So what looks good? Roughly 67% of the school districts are using most (>70%) of the IPM practices queried about in the survey. IPM practices included having a pest management policy, using a person trained in pest management to decide that pesticides need to be applied, using a person trained in pest management to apply pesticides, using monitoring devices or inspections to help determine when and where pesticides should be applied, pest-proofing, using cockroach baits, applying pesticides in cracks and crevices, using a logbook, keeping occupants out of treated areas and not spraying buildings or equipment for head lice. Most schools districts (65%) are keeping occupants out of pesticide-treated areas overnight. The percentage of school districts pest-proofing doors and monitoring for pests has increased each year, with 2015 values of 99 and 81%, respectively. The trends for most IPM practices have been positive or steady.

What needs improvement?

1. A schedule is still determining when pesticides are applied in 51% of the school districts. We would like to see pest sightings, or results from inspections or monitoring devices as the trigger for pesticide applications. The overall trend is a decreasing percentage of school districts applying pesticides on a scheduled basis, but I hope the trend hasn't leveled out. I think this question is a bit ambiguous. Because the pest management professional is present on the same day of each month, the respondents might have interpreted this question as the pest management person applying pesticides on a predetermined schedule.

2. Also, 40% of respondents are still spraying baseboards regardless of pest presence which is a 10 and 34 drop in percentage points from 2013 and 1997, respectively. We have made some progress in this area. Spraying baseboards is often ineffective and not necessary. We would like to see pest sightings or results from inspections or monitoring devices as the trigger for pesticide applications. Monitoring devices and inspections also determine where the pest is most active. Pests are often hidden in a crack and crevice and not found in an open area such as on a baseboard.

3. Baiting for cockroaches is only performed in 47% of the school districts. Baiting may be occurring more frequently because 39% of responding school districts were unsure if bait had been used for roaches. The cockroach baiting trend is flat —we just don't seem to be making much progress in this area. Baiting aids in getting the pesticide back into the cockroach harborage site. Bait is placed in or near a crack and crevice where cockroaches have been found on glueboards or have been sighted during an inspection. The cockroach feeds on the bait and either dies in the harborage and is eaten (necrophagy), or its feces containing toxicant is eaten (coprophagy) or its vomit containing the toxicant is eaten (emetophagy). Baiting is a very efficient way to control roaches and has been proven to reduce the cockroach allergen load without other effort. We should alternate the type of cockroach bait used to prevent insecticidal or behavioral resistance from occurring.

Based on these first three needed improvements, I believe we are still hovering near 50% of Tennessee's schools using IPM.

4. Only 52% of school districts are using a logbook which is crucial to any IPM program. This was a 17 percentage point increase from 2011, but overall the trend is flat or slightly negative. We must make more progress on this variable! Occupants should have access to information describing pesticide treatments. If pest control services (monitoring and inspections as well as pesticide applications, etc.) are performed on the same day of each month, concerned individuals could inquire if, when, where and what pesticides were applied before entering the school the next day. Accurate record keeping is essential to a successful

IPM program. It allows the school to evaluate the results of practicing IPM to determine if pest management objectives have been met. Keeping accurate records leads to better decision making and more efficient procurement. Accurate records of inspecting, identifying and monitoring can document changes in the site environment (less available food, water or shelter), physical changes (exclusion and repairs), pest population changes (increased or reduced, older or younger pests) or changes in the amount of damage or loss.

Each school should keep a complete and accurate logbook of pest control services. Pesticide use records also should be maintained to meet any requirements of the Tennessee Department of Agriculture and the school's administrators. The logbook should contain the following items: Pest Sighting Log, Structural Repair Log, Inspection Forms, Maps and Listing of Facility & Monitoring Station Locations, Pesticide Application Records, Time Log, Labels and Material Safety Data Sheets (MSDS), Newsletters and Web Sites, and IPM Policy & Plans or Contract. In the winter of 2012/13 we delivered enough logbooks to each school district in the state so they could distribute them to every school in their district. If you've misplaced yours, the entire logbook, minus the binder, can be downloaded at schoolipm.utk.edu.

5. Only 29% of school districts have developed a policy statement. While this is a 10 percentage point increase from 2011, it is still unsatisfactory. A policy statement should be written stating the school administration's intent to implement an integrated pest management program. It should briefly specify the expectations of the program, including the incorporation of existing services into an IPM program and the education and involvement of students, staff and pest manager. A model policy statement is provided in APPENDIX I of *Suggested Guidelines for Managing Pests in Tennessee's Schools: Adopting Integrated Pest Management* (https://utextension.tennessee.edu/publications/Documents/pb1603.pdf).

6. School personnel are still spraying buildings or equipment for head lice in 6% of the responding school districts—a 14 point drop from 2013. We would like this to drop to zero. We do not recommend spraying for head lice. Head lice don't live away from the human host for very long (< 2 days), and it is illegal for school personnel to apply pesticides in a school unless they are under the direct supervision of someone licensed by the Tennessee Department of Agriculture to apply pesticides. See the February 2011 newsletter (http://schoolipm.utk.edu/SchoolIPMsite/wwwroot/School Sample Site/Pests and Pesticides vol 4 issue 3 February 2011.pdf) for a lengthy discussion of this subject.

We can easily increase the number of school districts that are using IPM by doing just a few simple things: (1) create a policy statement by modifying our online example, (2) stop spraying baseboards as preventive pest control—it's not very effective, (3) bait for cockroaches—it's the preferred method by the world's experts and (4) use the logbook! If you need any help with these items, please contact us at kvail@utk.edu or (865)974-7138.

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Comments or questions on this newsletter?

Contact kvail@utk.edu

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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 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 2015 http://www.ipminstitute.org/school_ipm_2015.htm

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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