Good communications between all occupants (students and staff), parents, pest manager and decision-makers is needed for integrated pest management (IPM) to be successful in schools. All employees have an effect on their school’s IPM program. Even staff with no formal responsibility for pest control can determine the degree of success of an IPM program; every employee has some influence on the school environment. The school environment determines whether pests will become a serious problem. When the roles of each of these people are identified and agreed upon, and they are communicating clearly to each other, an effective pest management system that lends itself to less expensive protection of the site and people can be achieved with fewer risks. Here are some of the roles and responsibilities shared by school employees and occupants.

Kitchen Staff
Food-handling and preparation areas are among the most crucial areas for pest management. It is imperative that kitchen staff understand the importance of good sanitation, kitchen management and proper food storage. For example, lids should be kept on garbage cans, spills cleaned as soon as possible and food stored in pest-proof containers. Cardboard provides excellent shelter for German cockroaches and should be removed from the kitchen areas. A well-trained kitchen staff can assist the district’s IPM staff in locating and eliminating pest harborage areas. Kitchen staff should also be involved in periodic IPM training.

Custodial, Maintenance and Groundskeeper Staff
Custodial, maintenance and groundskeeper staff both have significant roles to play in an IPM program. Custodial and maintenance staff are responsible for recognizing and correcting conditions that may lead to pest problems such as water leaks, potential pest entryways and substandard sanitation practices. Maintenance staff are responsible for sealing cracks and crevices in walls and around pipes to reduce shelter for and dispersal of cockroaches. These personnel are most often exposed to the pests and should report location and pests sighted in the logbook and to the IPM coordinator. Outdoors, many pest problems can be reduced through good horticultural practices. With proper landscape design and maintenance, many pesticide applications can be avoided. Because custodial and grounds-keeping personnel often are not trained to recognize conditions that may lead to pest problems, those staffs should participate in IPM training, perhaps organized by the IPM coordinator.
Faculty & Staff

Faculty and staff inhabit classrooms and food service areas and as a result are exposed to all the same risks as students. In addition, faculty and staff should not introduce potentially harmful "bug sprays" into the classroom. Commonly used "over-the-counter" products available at local stores often contain the same ingredients as those products available only to licensed pest control operators. When used in the classroom, these sprays are potentially dangerous to chemically sensitive children. Also, these products can make some pest problems worse because they may interfere with or even reduce the effectiveness of treatments made previously by the pest management staff. Faculty and staff can follow several steps to help IPM to work.

Never Bring in Cans of Bug Spray.
If you have an emergency pest problem, follow the procedure provided by the pest management personnel. Hopefully, a mechanism exists whereby you can notify the pest management technician (by telephone or written report) of any pest problems so they can quickly treat the problem. Do not buy pesticide products at local stores to use in school areas.

Do Not Allow Exposed Food or Drink in the Classroom.
Do not bring food or beverage items into the classroom, except in sealed containers (i.e. lunch boxes). It is very important to continually remind children that food and snacks are to be eaten in the cafeteria, not the classroom. Even the tiniest of crumbs is a full meal for rodents, cockroaches or ants. If food incentives are used in the classroom, they should be stored in plastic, sealable containers. If items are small, freezer bags are recommended because they are made of a thicker material that is more pest resistant than the cheaper baggies. If your school has a "grab-and -go" type of meal, assign a daily "clean team" to sweep crumbs and remove food trash from the classroom once the meal is over. Also, remember that recyclable goods kept indoors provide food and harborage for many pests. These items should be thoroughly cleaned and rinsed before storage.

Keep the Classroom as Clean as Possible.
Sanitation, not pesticides, makes the biggest impact on pest populations. Cleaning up after any pets in the classroom and after parties is an absolute must. Empty soda cans, used paper plates, food wrappings, etc. should be placed in the trash can and then hauled to an outside dumpster before the end of the day. Trash cans full of this type of debris left overnight in the classroom are often sources of pest problems.

Get to Know the Pest Management Staff.
Whether pest control is handled "in-house" or is contracted out, try and interact with the pest control technicians as often as possible. The more communication that occurs between the faculty/staff and the pest control technician, the more effective pest control will be. It is very important for teachers/school staff to communicate with the pest control technicians about the kind of pest problems that exist. Specifics such as where the pests are (i.e. near the sink in the rear of the classroom), what kind of pests exist (i.e. cockroaches, ants, wasps, rodents), and when they are a problem (i.e. only in the morning or all the time) is valuable information to the pest control technician. The technician will be better prepared to treat the pest problem with this sort of information.

Begin Using a Pest Sighting Log.
Pest Sighting Logs are used by school employees to communicate pest problems to the pest control technician. The log is a record of when the pests were seen, by whom, where, and what kind of pests were present. The pest control technician checks the log and then uses the information provided to treat the problem. The pest control technician also records what action was taken to treat the pest problem on the Pest Sighting Log. Information such as what pests were identified, what the cause of the pest problem was, and what action was taken (including exclusion, sanitation, or pesticides, if any) is important to record. The pest control technician also makes recommendations to building maintenance staff on the Pest Sighting Log about what changes in maintenance might help prevent future pest problems (installation of proper door sweeps, turning off unnecessary lights at night, installing proper window screening). A Pest Sighting Log should be kept in an accessible area such as the main office or cafeteria manager's office, or both.
Administrators
Administrators and school boards set the tone for the IPM program. Their first responsibilities are selecting a qualified individual for the IPM coordinator’s position and establishing a pest management policy. Administrators should have a general understanding of:
• suggestions pertaining to IPM in schools,
• the possible penalties for improper pesticide use by in-house pesticide applicators, and
• pesticide safety issues and decision-making about which pesticide products are appropriate for district use.

Perhaps the most crucial role of administration is assigning priorities for building maintenance requests submitted by the IPM coordinator. Without administrative support for such requests, as well as requests to correct other reported problems (such as inadequate sanitation or improper management practices), IPM programs will be restricted in their effectiveness.

Overseer of Pest Control Services Logbook
Each school should appoint someone to oversee the logbook that contains the pest control service records.

System IPM Coordinator
The IPM Coordinator plays a major role in a school IPM program. Each school district should designate a system IPM coordinator. This person is responsible for overseeing most of the day-to-day requirements of the district’s program. The IPM coordinator should attend training on IPM in the schools provided by University of Tennessee Extension, or other creditable trainers.

The IPM coordinator will:
• Maintain a priority list of needed structural and landscape improvements and ensure improvements are made in a timely manner.
• Work with district administrators when contracting for pest control work to ensure that bid specifications comply with the district’s IPM policy and the principles of IPM.
• After the contract is awarded, make sure that the current pest management technician is following integrated pest management, school policy, plans and contracts.
• Distribute IPM materials (newsletters) provided by UT Extension and others sources to teachers, administrators and staff.
• Ensure the UT Child-serving Facility IPM Logbook is at a central location, such as the front office, in each school and appoint a logbook overseer (secretary) and local technical IPM coordinator at each school.
• Inform school personnel and students about IPM, the Child-serving Facility IPM Logbook and the logbook’s location at each school.
• Insert a map of the school in the appropriate chapter into each school’s logbook (a map of the grounds can be downloaded from Google Earth and the fire evacuation plans are a suitable map for indoor locations).
• Oversee district in-house pest management personnel.
• Educate employees of in-house licensed programs who apply pesticides to use the appropriate personal protective equipment.
• If in-house pest management personnel are applying pesticides to the structure, the IPM coordinator should ensure they are licensed.

Local Onsite Technical IPM Coordinator
A local onsite technical IPM coordinator is assigned to each school and will be responsible for many of the system IPM coordinators responsibilities, but at the school level. In addition he/she will:
• Attend all training sessions.
• Attend all school technical inspections conducted by the pest management professional.
• Educate school personnel with regard to pests, pest prevention and program status during each scheduled visit.
• Ensure pesticide applications to the grounds and the indoors are entered into the logbook (pesticide application records form and maps).
• Check monitoring stations (glue boards) for trapped insects and rodents and record in logbook. See CDC web site for proper disposal of rodents.
Extension Agents to Discuss IPM With Each School System
By Karen Vail

Tennessee Extension agents have been requested to discuss integrated pest management with the director of each of their county’s school systems. Integrated pest management (IPM) is a common sense approach to pest management that emphasizes the use of low risk but effective means to suppress pests. Control strategies in an IPM program include monitoring, sanitation and exclusion practices and extend beyond the application of pesticides to reduce access to food, water and harborage used by pests.

Although some Tennessee school districts in urban areas have adopted IPM, acceptance has been slower in rural areas. Extension agents from each of the 95 county offices have been challenged to help increase the adoption of IPM especially in rural school districts. Every county Extension office should have received a school IPM log book to present to the school pest management decision-maker or director of schools for each school district in their county.

In the 2009-2010 school year, a school IPM demonstration is being conducted in three school districts, each in a different Tennessee Department of Education school region. In all cases, the county Extension agent is an integral member of the IPM adoption team. For the 2010-2011 school year, we are looking for county Extension agent volunteers in the Mid-Cumberland School Region (Cheatham, Dickson, Houston, Humphreys, Montgomery, Robertson, and Rutherford counties) to assist with an IPM demonstration in one school, in one school district, presumably, in their own county. Extension agents have nominated school systems from the East Tennessee and First Tennessee Department of Education Regions for the 2010-2011 school year.

If your school is in the Mid-Cumberland School Region and would like to be considered for next year’s IPM demonstration, contact your local county Extension agent. A directory of agents can be found at http://www.agriculture.utk.edu/personnel/districts_counties/default.asp. Each agent will submit the name and address of the school, a school contact person with contact information and justification of why this school should be chosen, in an email to Karen Vail at kvail@utk.edu. Valid reasons for inclusion in the program include high pest populations, pesticide application practices not consistent with IPM practices (spraying monthly, spraying baseboards, etc. regardless of pest populations), and school personnel/parent interest. Once the school is accepted as the demonstration site, a school administrator, facilities director (pest management decision-maker) and pest management professional will be required to sign a memorandum of understanding indicating their commitment to adopting school IPM.

Rodent feces found during a school IPM inspection.
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.

Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development. University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating. UT Extension provides equal opportunities in programs and employment.