



## Tennessee

When a Tellico Elementary School student began feeling sick after a pesticide application, school officials knew they needed an alternative. Having had the pest control schedule in place for years, however, they saw only two options: to discontinue the pesticide treatments and risk pest infestation or to ask the student to continue the school year at home. To prevent the latter, the girl's parents and an environmental advocate called the Urban IPM program at the University of Tennessee.

The subsequent visit from the University of Tennessee Extension faculty suddenly gave them more options: with integrated pest management practices, the school could control the pests and limit the students' exposure to pesticides. The student re-entered the school the following year.

Helping children stay in school safely has been Karen Vail's goal since the mid-1990s. Vail, an urban entomologist at the University of Tennessee's IPM program, started a school IPM program for Tennessee schools in March 1996, after the Tennessee Department of Agriculture asked her to begin promoting school IPM, following a legislative change requiring pesticide applicators at schools to be under the supervision of a person licensed to apply pesticides. In a partnership between the Department of Agriculture and the University of Tennessee, Vail and her collaborators developed manuals and made phone calls to survey schools about their knowledge about IPM. When they started in 1997, only 11.7 percent of school systems used IPM. After five years of training school personnel, pest management professionals, parents and environmental advocates, the percentage more than doubled to 24.5 percent.

While the number of schools using IPM was increasing, however, the number of child care facilities using environmentally and child-friendly pest management practices still seemed dangerously low. In 2001, the University of Tennessee Youth, Environment and Health (UT YEAH) research team, which included Vail, Martha Keel from Family and Consumer Science, Mary Rogge from the College of Social Work and Susan Smith from the Department of Health and Safety Sciences, was formed and the program enlarged to include all child-serving facilities. Since then Pat Parkman, the University of Tennessee IPM Coordinator, has joined the team. Several years later, a survey revealed less than 6 percent of child care facilities were using IPM methods.

"In the child care centers, there's a higher susceptibility for the child, yet only 6 percent of them are using IPM," Vail said. "There was no nationwide pest management contract model for the smaller centers, so most of them didn't know what to address in this type of contract."

"We went across the state in 2001 and talked about child-serving facility IPM to many stakeholders including representatives from schools, government, pest control organizations, healthcare professions, environmental groups, concerned citizens, parents and childcare providers and regulators," Vail said. "But we really need to reach out to the rural areas. That's where I hope the Extension agents can help."

While the UT YEAH team knew that they eventually had to reach all of the schools throughout Tennessee, they also realized their team would be unable to complete that task alone. So in 2001, the team began their education strategy by training people -- county agricultural and family and consumer science Extension agents -- they knew could reach and train school and child care personnel that the team could not reach.

In 2005, a Southern Region IPM grant helped to expand their workshops and gain even more ground. In addition to another agent training, this time workshops included school purchasing officers and pest management decision-makers who were then trained to understand IPM and the development of pest management bid specifications. Bid specifications were posted to the web site in an editable format thus allowing school personnel to download and modify it for their specific school system. These and other child-serving facility IPM resources were made available from the UT YEAH web sites at [http://eppserver.ag.utk.edu/School%20IPM/sch\\_ipm.htm](http://eppserver.ag.utk.edu/School%20IPM/sch_ipm.htm) or <http://utyeah.utk.edu/>. Each participant also left the workshop with a binder that held materials that had been presented that day including a child-serving facility IPM Logbook which, when used in a facility, would keep all interested parties informed of pest and pesticide-related information.

"I knew if I didn't get IPM into the bid specs, it wasn't going to happen," Vail said.

UT YEAH also set up a Blackboard site for Extension agents to download all training materials. Agents will be quizzed before they download the training information to ensure they understand the

### Training School Purchasing Officers and Extension Agent Trainers to Increase IPM Adoption in Tennessee's Child-Serving Facilities

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#### Lead Institution:

University of Tennessee

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*—Karen Vail*

# Tennessee (continued)

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material they are distributing. A new Extension record keeping system (SUPER) will allow the team to track classes taught by the agents and record understanding of pests and pesticides from pre- and post-training quizzes.

In addition to conducting general workshops, Vail and her team visited schools to point out potential problems to school personnel. Tellico Elementary was one of them.

“We visit the schools and point out what needs to be changed,” said Vail. “Our goal is to create better indoor air quality.”

And Tellico Elementary School staff were ready for a change—primarily because the chemical sprays were believed to have compromised the health of one of their students. After Vail’s visit, maintenance supervisor Charles Underwood began making changes, not only in structural repairs but in daily habits as well.

“We stopped all eating in the classrooms and required teachers to take students to a designated area for snacks,” he said in an answer to a questionnaire. “We later found that this was not necessary if all trash was removed from the rooms on a daily basis.”

Over the next several months, school staff and teachers continued making modifications, and Un-

derwood discovered that by the end of the year, pest control costs remained the same—and the pests had not returned.

While Vail was initially disappointed by the slow progress the IPM trainings were making, she is satisfied with the results.

“If we could increase IPM adoption in these facilities by ten percent every year, I’d consider our program successful,” she said.

Currently their team is developing a password-protected site that will allow designated school and childcare personnel to post their pest management practices to an interactive survey online on the Internet. In the past, the team rated a facility as using IPM or not using IPM. As part of the Southern Region IPM grant, they have developed a voluntary IPM certificate program and an IPM continuum that will rate facilities as using no, low, medium or high levels of IPM. As part of that certificate program, facilities using low to high IPM will be listed on the UT YEAH Web site to give parents information needed when deciding on a child-serving facility for their children and Extension agents will deliver a certificate with this rating to reward the school or childcare facility for its participation and to further market the program. Schools and childcare facilities can reapply each year for the certificate by taking the online, interactive survey.