Greetings from School IPM 2015!

Every day, 49 million children attend school in the United States, served by nearly seven million teachers and staff. But they're not alone. Schools are also frequented by a number of pests including cockroaches, mice, dust mites and more. Asthma is epidemic among children, impacting nearly 6% of school children nationally with rates as high as 25% in urban centers. Cockroaches are potent asthma triggers.

Integrated Pest Management (IPM) is a prevention-based, highly effective approach proven to reduce pest complaints and pesticide use by up to 90% in schools and other public buildings. IPM practices such as sanitation and exclusion also improve food safety, fire safety and energy conservation. Our newsletter highlights real-life examples of IPM in practice and can help you start an IPM program in your school district. For more information, visit www.schoolipm2015.com.

A Child Nutrition Manager's Perspective on IPM in Schools

Successful school IPM programs require communication and partnerships between parents, teachers, administrators, custodians, facility managers, food service staff and pest management professionals (PMPs). The overall mission and day-to-day tasks of facilities and kitchen staff often overlap, making collaboration essential for effective pest management. To better understand the role of food service staff in school IPM programs, we spoke with Venice Jensen of Salt Lake City School District about her experience as a child nutrition manager.

Approaching 20 years of employment at Salt Lake City School District, Jensen is a veteran in staffing, monitoring employees and most importantly, making sure students are served healthy food. She acts as a liaison between the supervising and purchasing departments, organizes bid contracts and collaborates with 200 child nutrition employees, including managers, nutrition techs and office staff. In 2006, Salt Lake City began IPM pilot projects in three schools. Working at Jackson Elementary at the time, Jensen recalls being invited to do school walk-throughs with PMPs, school staff and guest inspector Dr. Marc Lame of Indiana University. "We inspected and set out monitoring stations everywhere: basements and boiler rooms-the places pests love to hide," Jensen said of the school walk-throughs. By 2008, Salt Lake City's program was implemented district-wide, serving 25,000 students, faculty and staff in 36 schools.

“We try very hard to avoid pesticide use around the kitchen areas,”
Follow school IPM projects in Nebraska through University of Nebraska's [new blog](http://www.ipminstitute.org/school_ipm_2015/Jun10_eNewsletter.htm).

US EPA honors Westville School District for their IPM practices.


Join the [Schoolbugs listserv](http://www.ipminstitute.org/school_ipm_2015/Jun10_eNewsletter.htm) to ask questions, learn from others and share successes and challenges.

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Jensen asserts, "Our child nutrition and facility management departments work together toward our common goal: controlling pests without unnecessary chemicals." Among administrators and school staff, Salt Lake City's school IPM program has been a positive experience. This is partly due to the district's iPestManager reporting tool, developed and implemented by director of facilities, Gregg Smith and his team. If a school staff or faculty member experiences pest issues, they can log into the iPestManager system to report the problem. Maintenance staff members are immediately notified of the pest presence and can follow up very quickly, usually within a day or two.

Since implementing IPM, the nutrition and food department has made two main physical changes: eliminating clutter and storing food more efficiently. "After learning that cardboard boxes are harbors for cockroaches and midnight snacks for mice, we now try to remove cardboard from kitchens as quickly as possible," Jensen explains. If storage is needed, Jensen suggests plastic bins as a sustainable replacement to cardboard boxes. "Plastic storage containers are a low expense to districts," she says, "they don't sag or easily break, are easy to clean and can be reused year after year."

Salt Lake City's IPM program has bolstered relationships between child nutrition and kitchen staff, administrators and certified maintenance personnel through frequent one-on-one IPM education and the formation of an IPM committee. According to Jensen, IPM has been well received by managers because it increases awareness, reduces the need for chemical methods of pest control and identifies areas of improvement, such as sealing holes, cracks and crevices to prevent pest entry. "Our IPM program is saving the school district money," says Jensen. "Although there are initial costs for preventative supplies-like door sweeps and monitoring stations-as well as facility manager certification, the long term savings are definitely worth it."

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**A Conversation with Dr. Al Fournier: School IPM Research Highlights**

Al Fournier, IPM program manager and assistant specialist in entomology at the University of Arizona (UA), serves as associate director of the Arizona Pest Management Center (APMC). He helps plan, manage, evaluate and report on UA IPM programs. He also participates in the UA IPM Coordinating Committee, an interdisciplinary advisory board made up of College of Agriculture and Life Sciences (CALS) faculty and external stakeholders, which identifies statewide IPM research and education priorities. UA IPM programs focus on reducing risks from pests and pest management practices in agricultural, urban and natural settings.

You are now considered an expert in entomology and IPM. Did you intend to specialize in these topics when you first started school? Al Fournier: I guess that depends on how far back you go, right? As a kid, I caught grasshoppers, bees, spiders and lightning bugs in jars and studied ants for hours, but I had no idea that people actually studied insects for a living. As an undergraduate student, I started as an English major until I got excited about a biology class. From there I narrowed my interests to invertebrates and plants. I couldn't decide between studying plants or insects, so I began to focus on their interactions, which quickly led me to IPM. It wasn't until after completing my Masters of Science degree, when I was working for Dr. Amy Brown at the University of Maryland in 1999, that I first heard...
What lead you and your advisors Drs. Gibb and Osteo to research school IPM?
AF: In 2000, I was exploring options for a Ph.D. program and school IPM had become a “hot topic” because of increased interest in reducing pesticide use in children’s environments. I found a great opportunity at Purdue University. Dr. Tim Gibb, in collaboration with Dr. Marc Lame (Indiana University) and Bobby Corrigan (RMC Pest Management), had a grant from the Indiana Department of Environmental Management which focused on implementing IPM pilot programs in three school districts and four child care centers. My graduate position was in part funded through this project. It was my role to educate pilot participants and to oversee IPM program implementation for these projects. I became interested in communication and social issues when I saw schools struggling with “IPM adoption” even though they often understood its technical aspects. I learned that each department and individual within a school has their own set of responsibilities and priorities and all of these perspectives have an influence on how IPM gets implemented. All of this led me to my research project, in which I used a case study approach to understand factors that can influence IPM adoption and implementation in the school environment. This is what our book is about.

On your website, Dr. Dawn Gouge gives a very engaging review of your book Go to the Head of the Class: A Research-based Approach to Understanding Adoption and Implementation of Integrated Pest Management in Schools. Could you give us some highlights from this book? What would school facility managers, IPM coordinators and superintendents be most interested in?
AF: The research involved two major components: a statewide survey of Indiana school districts to document pest management policies and IPM practices; and case studies that examine school IPM program implementation in four separate school districts. The case studies were based on 28 interviews with school staff and pest management providers, IPM inspections, observations of pest management service providers and analysis of pest management policies, service records and other documents. All these data sources were used to develop descriptions of each school district’s IPM program. These programs were then compared to a technical definition of school IPM that is largely based on the IPM Institute’s “IPM Standards for Schools”.

Facility managers, extension educators and government personnel will be most interested in the conclusions of the school IPM case studies. I think they will recognize familiar themes and be able to relate those themes to their own situation and perhaps to learn some new ideas. The first chapter presents a literature review of school IPM, much of which is “gray” literature—things like grant reports, state pest management surveys and school IPM program materials and websites. The goal was to present an overview of the work that had been done on school IPM through 2004.
What have you heard from readers about what your book has taught them?
AF: The most exciting contact I have had was from a school district facilities director who helps manage a strong IPM program for an urban school district. He said he's only begun thumbing through the book but already sees parallels with his district's approach to IPM and some of the challenges they have encountered. I should say that the book is rather long, mainly because of the in-depth nature of the case studies which dominate the book. I think it may take people some time to digest it, but I hope once they do it will provide some ideas or insights that will help further school IPM programs. I look forward to receiving feedback from school insiders because reader dialog will provide a “reality check” for the research findings.

Any last words?
AF: No one person or department can make a school IPM program work on their own. Successful programs require partnerships and communication among school personnel and departments and the pest management professionals that service the schools.

For more information on Dr. Fournier's book, please visit: http://cals.arizona.edu/apmc/westernschoolIPM.html

⇒ Happy, Healthy and Successful Children and Communities through IPM - School IPM 2015

Millions of children, teachers, support staff and parents spend substantial amounts of time in schools and on school grounds every day. More than 50 published surveys and studies since 1994 have documented deficiencies including unmanaged pest infestations, unsafe and illegal use of pesticides and unnecessary pesticide exposures to individuals at schools, which can negatively affect children's health and academic performance. Pest complaints and pesticide use in schools and other public buildings have been reduced by 71 to 93% through Integrated Pest Management (IPM), with no long-term increase in costs.

Thanks to support from the U.S. EPA 2008 Pesticide Registration Improvement Renewal Act (PRIA 2) Partnership Grant, the School IPM 2015 National Working Group—a collaboration between the IPM Institute of North America, the USDA NIFA IPM Centers, US EPA, land-grant universities, school district personnel, private industry, non-governmental organizations and consultants—is working with schools across the country to improve existing pest management practices with the goal of improving pest management standards, reducing risks and establishing awareness of high-level IPM in all U.S. K-12 public schools by 2015. Since 2006, National Working Group members have secured additional school IPM funding from the USDA NIFA Regional IPM Centers, the University of Connecticut, Cornell University, Texas A&M University, University of Maine, the New York State Department of Environmental Conservation, University of Florida, University of Arizona and the Pennsylvania Preschool Project.

Dr. Thomas Green, president of the IPM Institute of North America, Inc. states that "the challenge is to help staff and administrators replicate existing IPM successes in child care and school facilities around the country." The School IPM 2015 National Working Group, comprised of the 193 total members of the four Regional Working Groups, has established effective, vigorous national coordination and is making substantial progress towards integrating IPM into the infrastructure of professionals already working in schools who are motivated to protect
children’s health including administrators, facility managers, school food service and school health employees. “National coordination has been essential in reducing duplication of efforts and engaging a wide range of stakeholders in the implementation process,” remarked Janet Hurley, co-leader of the Southern Region Working Group. School IPM experts and practitioners lead each Regional Working Group-Lynn Braband and Kathy Murray in the Northeast region, Janet Hurley and Fudd Graham in the Southern region, Carrie Foss, Dawn Gouge and Tim Stock in the Western region and Tom Green and Bob Stoddard in the North Central region.

“Despite limited resources and inconsistent state legislation across the country, the National Working Group has accomplished a great deal on a very small budget,” explains Dr. Dawn Gouge, urban entomologist and co-director of the Western School IPM Working Group. The School IPM 2015 National Working Group has established IPM pilot schools around the country which adopt proven IPM approaches, to successfully demonstrate IPM in their region and state. Dr. Gouge ardently emphasizes that “the benefits to school systems are huge. This is not rocket science, just plain old common sense. Risks are reduced, often dramatically, districts come into compliance with state regulations, and when all things are considered, IPM becomes cost-neutral more often than not.” In addition to pilot programs, Working Group members have established IPM coalitions in which professionals already trained and working in demonstration schools recruit and mentor professionals from other school systems in their local community. To date, pilot and coalition projects have impacted over 400,000 school children and staff. Considering the $1.8 million in grant funds secured by the National Working Group since 2006, each year, it has cost $1.14 per child to establish a safer learning environment—money well spent!

Through improved coordination nationally, the School IPM 2015 National Working Group wants to generate a commitment from agencies, organizations and individuals already working in and influencing schools, including school staff, parents, legislators, researchers, regulatory agencies, advocacy groups, contractors and pest management professionals. For more information or to get involved with the School IPM 2015 initiative, please visit http://www.schoolipm2015.com.

Asthma and asthma triggers are commonly associated with cockroaches, rodents and dust mites, making pests and pesticides a public health issue, especially for students with asthma. Dr. Gouge emphasizes this point: “All students benefit from reduced exposure to pests, related allergens and unnecessary pesticides, but for asthmatic students, it can make the difference between succeeding and failing in school. After all, breathing isn’t optional, and a child struggling for breath is not going to be focused on learning”.

It’s time to work together to implement IPM for every student, every school, everywhere!