A LETTER FROM THE EDITOR

In our last issue of the School’s Update, we talked about EPA’s mission to protect human health and the environment. We at EPA have taken an active role to ensure that our nation’s children are safe. The EPA’s school programs are multifaceted. As you know, this School’s Update comes from the Office of Pesticide Programs within EPA. At a higher level is a workgroup whose primary focus is schools. This workgroup includes EPA representatives from many different programs, including ours. The programs included in this workgroup are: Office of Water, Office of Indoor Air, SunWise, Tools For Schools, Energy Star, etc. The school’s workgroup has created a webportal that is rightly named, The Healthy School Environments Web. These pages are intended to serve as a gateway to on-line resources to help facility managers, school administrators, architects, design engineers, school nurses, parents, teachers and staff address environmental health issues in schools. I urge you to check out the website at: http://www.epa.gov/schools for a wealth of school information.

The Office of Children’s Health Protection, created back during the Clinton Administration, still continues to support our school’s efforts. This office is directly involved in the leadership of the school’s workgroup as well as the Agency Level, Presidential Task Force that I describe below. Interestingly enough, this office has proved to be a partner in helping us within OPP further our mission in implementing IPM in our nation’s schools. Just recently, the Office of Children’s Health Protection funded a IPM in schools project out of Region 6 (Dallas). I hope that this partnership continues to grow in the future.

The President of the United States has formed a Task Force on Environmental Health Risks and Safety Risks to Children. The workgroup is comprised of representatives from US EPA, US Health and Human Services, Department of Labor, Department of Housing and Urban Development, Department of Agriculture, Department of Justice, Office of Management and Budget, Department of Transportation, Consumer Product Safety Commission and Assistant’s to the President’s Council of Domestic Policy and Office of Science and Technology Policy. This workgroup, although obviously political, is working on a strategy for collaborative action to create healthy school environments. Several of the workgroup’s proposed recommendations include:

1) Improve coordination, collaboration and integration of programs within and across Federal Departments and Agencies with school environmental health responsibilities;

2) Expand research into the relationships between environmental conditions in schools and impacts on student and staff performance;

3) Establish effective mechanisms for tracking environmental health of students and staff in the nation’s schools;

4) Assist states and communities in making existing schools the healthiest possible places for children to learn; and

5) Build a new generation of high performance green schools.

Let’s refocus back to the Office of Pesticide Programs within EPA. Here, in the Biopesticides and Pollution Prevention Division (BPPD), we have several initiatives that lead to pesticide risk reduction. The one initiative, the Pesticide Environmental Stewardship Program (PESP), launched in 1994 boasts over 140 members who are from both agricultural and non-agricultural sectors. Many of our non-agricultural members are directly involved with IPM in schools. This issue focuses on some of
the PESP Members: Auburn University, National Pest Management Association. Other PESP Members working with schools and IPM issues, not referred to in this Update, are: Bio-Integral Resource Center, IPM Institute for North America (President Tom Green was featured in the first Update), Kyrene (AZ) School District, Monroe County (IN) School Corporation, SW School IPM Technical Resource Center and U.S. Department of Defense. Many of our PESP Members have received PESP grants that have been used to further their work with IPM in schools.

Besides maintaining and promoting PESP within BPPD, the Office of Pesticide Programs formed a workgroup over two years ago to address school issues. The workgroup is composed of members throughout the Office, including two representatives from Region 5 (Chicago) and Region 9 (San Francisco). We have accomplished several objectives, of which most of you are familiar with. The workgroup was able to launch the OPP Schools website: http://www.epa.gov/pesticides/ipm

In addition, we designed and distributed the school’s brochure: Protecting Children in Schools from Pests and Pesticides. More than 200,000 copies have been distributed to our Nation’s schools. The group has been somewhat active with outreach, only attending local conferences due to travel constraints. Last but certainly not least, the workgroup was able to fund two Technical Resource Centers for School IPM, one being at Purdue in Indiana and the other at Texas A&M.

On another note, I wanted to publicly thank Kristi Kubista-Hovis for her long hours and true commitment and dedication to our work here at EPA. Kristi has served as our intern here through the ECO-Intern Program, within BPPD. Not only has she been extremely helpful for me, but she has also been immersed into our strategy evaluations of our PESP members. I wish Kristi the best and will miss her hard work and enthusiasm. She will be returning back to Indiana University in a few weeks, where she will continue to work on her two Master degrees.

I personally commit to continue the School’s Update, although they may not be as frequent as these last two issues have.

Sherry Glick
Pesticides and Schools Coordinator
US Environmental Protection Agency
Office of Pesticide Programs
Biopesticides and Pollution Prevention Division
Pollution Prevention Branch

FUNDING OPPORTUNITIES/RESOURCES

In this difficult economy, with severe budget constraints, funding is scarce. Please accept our commiserations. Though we may not be able to provide funding for your organization, the tools in this section can be used in brainstorming potential funding vehicles. The following is a list of web sites that highlight different funding opportunities. We hope these resources are helpful to you while you search for financial backing. Good luck!

http://ipm.ifas.ufl.edu/funding/grants_table.htm
http://www.epa.gov/ebtpages/econgrants.html
http://northeastipm.org/fund/
http://paipm.cas.psu.edu/funding.html
http://news.ucanr.org/newsstorymain.cfm?story=96
http://www.pmcenters.org/Funding/index.cfm
http://www.agr.state.tx.us/iga/grants_funding/
http://www.clemson.edu/scg/sust/funding.html
http://www.vetmed.ucdavis.edu/research/Funding/federal.cfm
In addition to this list of web sites and the grant mentioned in the following section, a search engine can help you locate additional funding opportunities. We have attached a copy of Donald Baumgartner’s report entitled “School IPM Funding Opportunities in Region 5”. To view the article, please scroll to the end of this document.

$4 MILLION TO IMPROVE NUTRITION

Training grants totaling over $4 million will help state agencies improve children’s lifelong eating and physical activity habits. Agriculture Under Secretary for Food, Nutrition and Consumer Services Eric M. Bost announced (July 21) the Team Nutrition grants at the America School Food Service Association Annual Conference. He also released “Fruits and Vegetables Galore: Helping Kids Eat More, a Team Nutrition tool for school food service staff.” “Reducing the rates of childhood obesity and creating a healthier school environment is a priority for the Bush Administration,” said Bost. “President Bush’s Healthier U.S. initiative promotes eating healthy diets, including plenty of fruits and vegetables, as well as increasing physical activity. The Team Nutrition grants and the fruit and vegetable guide are resources that schools and state agencies can use to achieve the goal of improving children’s nutrition habits.”
Contact: Jean Daniel (202) 236-9945.

History of PESP Funding

EPA’s Office of Pesticide Programs (OPP), in cooperation with the ten EPA Regional Offices, annually awards grants to States and all Federally recognized Native American Tribes for research, public education, training, monitoring, demonstrations and studies. This program, ongoing since at least FY1996, is supported with State and Tribal Assistance Grants (STAG) funds. OPP’s Biopesticides and Pollution Prevention Division coordinates the program and issues a national announcement of the availability of funds. However, each EPA Regional Office collects, reviews, selects the proposals for funding, and administers the specific projects in their region. Traditionally, each Region selects one project for funding through an open, competitive process. Then, each region submits their top unfunded project into a national pool which is further reviewed and the top ranking proposals from this pool are funded until the balance of available monies are obligated.

Goals

These research, public education, training, monitoring, and demonstration projects advance the pesticide risk reduction goal of PESP. They are important to and complement the ongoing pesticide risk reduction efforts and PESP activities of the EPA Regional Offices.

2003 Projects

The proposals for these projects are available at http://www.epa.gov/oppbppd1/PESPPregional_grants.htm
Because PESP seeks to address risk reduction in agricultural as well as non-agricultural settings, the projects selected in this program fall into both categories. While some strong agricultural projects were funded this year, a majority the projects selected for funding involve the implementation of IPM in schools. This continues to be an area in which significant risk reduction can be accomplished with minimal financial investment. The strong showing of these types of projects in this process also reflects the quality of the proposals and the recognition of the risk reduction potential they present.

Frank Ellis  
US Environmental Protection Agency  
Office of Pesticide Programs  
Biopesticides and Pollution Prevention Division  
Pollution Prevention Branch  
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703-308-8107

REACHING OUT TO ADMINISTRATORS

There are many possible routes available in implementing IPM. They range from activists motivating the school boards to implement policy, to the promotion of local, state, or national government regulations. The pathways are limitless and are only hindered by one’s imagination. The underlying theme of all these methods is communication. Initial contact, and first impressions will either promote or hinder your cause. Create a list of who you want to get involved in the movement and why.

The following is a list of national conferences that may be of interest. Displaying a booth/poster, or just attending the sessions as an IPM advocate will provide a face and contact information for administrators who may never have been exposed to IPM.

**National School Board Association Annual Conference**  
March 27-30 2004  
Orlando Florida  
http://www.nsba.org/conference/

**American Association of School Administrators**  
February 19-22,2004  
San Francisco, Monscone Convention Center  

**American Association for the Advancement of Science**  
February 12-16 2004,  
Seattle Washington  
http://www.aaas.org/meetings/

**School Science and Mathematics Association**  
http://www.ssma.org/conferences.html

**NorthAmerican Association for Environmental Education**  
October 7-11, 2003  
http://www.naaee.org/conferences/index.php

**National High School Association**  
http://www.nhsa.net/

**Association of Experiential Education**  
November 13-16, 2003  
http://www.aee.org/conf/nconf.htm

**Association for Supervision and Curriculum Development**  
March 20-22,2004  
New Orleans, Louisiana  
http://www.ascd.org/frameconferences.html

**National Association of Elementary School Principals**  
April 16-20 2004  
San Francisco, California  
http://www.naesp.org/conventions.html
If you are interested in working with these types of organizations, look in your local phone directory for a listing of teaching agencies. When you contact the organization, stress the importance of IPM, and its pertinence to their program. You will need to convince them that IPM must be taught to the teachers. With a little bit of pressure, successful partnerships will be able to expand IPM into countless communities.

**ALABAMA HIGHLIGHTS**

This month we are adding a new column to the Update that will highlight a state, region, tribe or other organization of the United States. This new column will provide background information on the surrounding factors that are facing the highlighted school/applicator, while at the same time, providing publicity to a state/region/tribe and organization that is promoting the successful school/applicator.

This issue will focus on Auburn University. Auburn has been a PESP member since 2000. Fudd Graham is the contact person. He is cooperating with the Department of Agriculture Industries, one of the recipients of the 2003 PESP grants. The grant will allow them to expand their IPM program with a coalition consisting of Dr. Graham, Dr. Ping Hu with the Alabama Cooperative Extension System, Joe Debrow and Tony Cofer of the Alabama Department of Agriculture and Industries, Dr Nancy Golson, principal at Dean Road Elementary School in Auburn, and Richard Lumpkin of Lumpkin Pest Management, the highlighted applicator of the month.

Along with creating the coalition, $20,000 of the funding will be used as a sweetener, to promote IPM in Mobile county, the Elmore County School System, the Alexander School System and Geneva Co. School System. The money will be used to assist with repairs and other maintenance.

Mobile County, which had three pilot schools last year, has decided to expand the program into all of the schools in its jurisdiction (over 100 schools). The coalition has obtained the cooperation of the school system, but they still need to get the

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**TEACHING THE TEACHERS OF TEACHERS**

Each year thousands of science teachers return to the classroom, learning new techniques, and revitalizing their curriculum. Many of these classes are put on by the universities, but others are sponsored by private entities. These private organizations have entomology and life science curriculums that deal with the behavioral patterns of insects, though few to none incorporate the importance of pest management, or IPM. Through numerous phone conversations with private and nonprofit agencies, we realize that this is an untouched resource. Executives were interested and enthusiastic about adding IPM to their teaching regimes. Many asked for additional contact and IPM information.

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**Association for the Education of Teachers of Science**
October 17-18 2003
Furman University, Greenville SC
[http://aets.chem.pitt.edu/welcome.htm](http://aets.chem.pitt.edu/welcome.htm)

**North Central Association for the Education of Teachers of Science meeting**
October 2-4, 2003
Rochester MN

**The Mid-Atlantic Association for the Education of Teachers of Science meeting**
October 24-25, 2003
Lake Lure, North Carolina

**The Association for the Education of Teachers of Science NE Regional Conference**
October 16-17, 2003.
Syracuse University
[http://aets.chem.pitt.edu/](http://aets.chem.pitt.edu/)
PCO’s on board. The PCO’s cooperation will hopefully be coming shortly, as the school system has just bid on a new IPM contract with a single PCO for the whole school system. IPM training is scheduled to start July 16th. Funding is being supplemented by the state, which has received funding to train PCO’s.

Elmore County School System will begin implementing IPM later this year. Richard Lumpkin will be the onsite coordinator, like Dr. Graham was in the Auburn System. They will begin with 3 pilot schools, though they still need to make initial contact with the system administrators to set up the program.

The Alexander City School System has a PCO that is already interested in implementing IPM into their system. Cook’s Pest control has agreed to work with Dr. Graham to learn how to implement IPM. The coalition is planning to contact the school system in August.

The Geneva Co. School System has also started using IPM. The Assistant Superintendent overheard School IPM discussions at the pest control meetings, became certified as a PCO, and has implemented a program of his own. The coalition will visit the schools and assist him with his program to bring it up to standards Auburn University set at Auburn City Schools.

If you are interested in learning more about Alabama’s IPM activities, please contact:

Dr. Fudd Graham
Coordinator - Alabama Fire Ant Management Project
301 Funchess Hall
Auburn University, AL 36849-5413
Office: (334) 844-2563
fgraham@acesag.auburn.edu

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AN ALABAMA APPLICATOR’S PERSPECTIVE

Introduction

Richard Lumpkin, the CEO of Lumpkin Pest Control in Notasulga, Alabama, started his company in June of 2002, when Majors Pest Control, his employer of 18 years, was bought out by a secondary party. Working for the last 20 years in the pest control business, he has been on both sides of the IPM debate. The following is his story, and the reasons why he has adopted IPM.

Richard Lumpkin’s story

I have been in the pest control business for just under 20 years. In May 2000, I was invited to participate in a pilot program for Integrated Pest Management with three Auburn City schools that were servicing on a monthly contract.

At first, I was skeptical and doubted the program could work. We were applying chemical inside and outside each month, and still had problems with German and smokey brown cockroaches.

We learned early in the program, that it must be a joint effort between the schools and the pest manager. The school staff had to organize storage areas and maintain cleanliness. At the same time, the school staff, maintenance persons and the pest control technicians all had to be trained to monitor each school, as well as implementing the pest management program.

After working with IPM for about six or eight months, we began to see the schools become much cleaner and nearly maintenance free.
The insect population decreased and the use of chemicals have decreased about 85% to 90%.

Now, we have eleven school’s and a daycare on the school IPM program. The chemical usage is down 90% to 95%. There have been periods of six to seven month lapses without applying any chemicals. Whenever it is necessary to use chemicals, we apply the least toxic and usually a lesser amount to take control of the problem.

Through monitoring and education of the technician and school staff, we have developed a safer and cleaner environment for the children. This environment could be achieved through a good working relationship and the dedication of all the parties involved.

Richard Lumpkin
Lumpkin Pest Control
334-257-1405
richardlumpl@aol.com

SCHOOL NEWS & RESOURCES
WEB SITES

IPM Pride Award: Southwest Technical Resource Center
The La Vega Independent School District was the first recipient of this award. The maintenance department will receive a cash prize of $1,000. The second place winner, Carrollton-Farmers Branch Independent School District, will receive a cash prize of $500. Irving, Katy, Pilot Point and Rogers school districts received honorable mentions for their IPM efforts.

USEPA Region 8: Debbie Kovacs
Region 8 is funding the development of the booklet “IPM Readers.” The Colorado Foundation for Agriculture will produce readers, with a teachers guide, for fourth/fifth graders, defining IPM and introducing concepts. The readers will mesh with Colorado’s mandatory student testing program, “CSAP.” The goal is to develop and understanding and awareness about IPM among Colorado students.

Monroe County Community School Corporation (MCCSC) Integrated Pest Management
http://www.ipm.mccsc.edu
The MCCSC has a new address for their “new” web page. The old address, if you have it, will still work, but this one is simpler and easier to remember.

Washington State University
Washington State University will be initiating a model schools project in the fall at K-12 schools. The implementation and evaluation of the project will be posted on the Washington IPM in Schools website that was launched during September 2002. http://www.ecy.wa.gov/programs/wq/nonpoint/upest/index.html

Thomas, legislative information: http://thomas.loc.gov/
Check for information on submitted federal bills. The IPM bill has not gone beyond referral to the Agriculture Subcommittee on Conservation, Credit, Rural Development and Research which occurred on 1/28/03.

Rutgers Coop. Extension Pest Management Office:
http://www.pestmanagement.rutgers.edu/IPM/SchoolIPM/index.ht
See the Home page for access to the resources described below:

1. Brochure: How NY & NJ Schools Can Make the Grade in School IPM
3. IPM Report Card: IPM practices are precisely outlined for control of common pests of New York & New Jersey school grounds. Use them to assess the implementation of IPM, or assess or specify landscaping procedures followed by staff or contractors.
4. Training sessions, and regional contacts for school IPM
5. The Key requirements of the NJ School IPM Act: adopted into law on December 12, 2002.
6. The New Jersey’s School IPM listserv: http://www.pestmanagement.rutgers.edu/NJinPAS/listservs.htm
The School IPM Web site:  
http://schoolipm.ifas.ufl.edu/  
The website has numerous 1/3, 1/2, and full page documents that may be helpful in implementing IPM. They are in Word format ready for editing and are based on larger HTML files developed by other individuals who have contributed to the Web site. During the last 12 months, 3,376 copies of these files were downloaded by individuals for their use. The most popular ones downloaded in the last three months were on spiders, wasps, and lice. Over the last twelve months, the School IPM Web site recorded 139,942 distinct visitors and 218,681 page views.

EPA: IAQ Design Tools for Schools  
This website provides detailed guidance as well as links to other information resources to help design new schools as well as repair, renovate and maintain existing facilities.  
Http://www.epa.gov/iaq/schooldesign

Iowa Department of Agriculture & Land Stewardship  
The department received a PESP grant. Under the proposal we plan to have a Midwestern Seminar on School IPM for 9 states that are within 3 EPA Regions. The seminar will be in the spring of 2004. They are also currently working to have CropLife America and the Responsible Industry for a Sound Environment (RISE) privately fund the travel expenses for an EPA representative from HQ, Region 5, 7, & 8 to attend the seminar, since using grant funds is prohibited.

Region 6  
On July 11-13th the Association of Asthma Educators met in Dallas. The Region 6 Indoor Air team had a complimentary exhibit. They handed out US EPA asthma, children’s health, and general indoor air quality including pesticides material. They were well received and met with many of the various asthma vendors and the conference participants. Cheryl Gainer attended the conference as much as possible and volunteered to be on the program committee for next year. The program chair desires to have TOOLS FOR SCHOOLS presented at next years conference which will be in Philadelphia.

Nebraska  
Nebraska is approaching IPM in Schools in phases. The first phase involved the development of a survey for school administrators; development of a brochure, website, and guidebook; as well as testifying at a legislative hearing. As a result of these activities, the Governor of Nebraska issued a Proclamation identifying 2003 as the “year of IPM.” It’s their understanding that UNL is on schedule to have the IPM Guidebooks and survey results distributed to Nebraska schools in August before students return for classes as part of Phase I.

Phase II will be funded by the National PESP grant. Phase II includes the development of learning modules and in-service programs to train Extension Educators, pest management professionals, and school staff on implementing IPM plans.

Pennsylvania IPM Program (PA IPM)  
The organization has recently produced the following publication, the PA IPM contributed information and materials to the IPM chapter: Environment and Ecology for Pennsylvania, Meeting the Standards  
The book is aimed at secondary educators to help their students understand the environment, natural resources, and the human impact upon them. The 272-page textbook contains activities, Pennsylvania-specific case studies, and lesson reviews. The textbook also includes chapters on topics ranging from watershed and wetlands and environmental health to threatened and endangered species and integrated pest management. In addition, it can be adapted to meet the needs of other states.

The PA IPM Program’s web site:  
http://paipm.cas.psu.edu offers information about the School IPM effort in Pennsylvania and links to educational material from across the country.

PA IPM was awarded $10,000 so the program can offer their course and workshop, “IPM for Teachers: Meeting New Academic Standards in Environment and Ecology” at various schools across the state.
The following is a summary of an initial survey of 19 school districts which was conducted by the NYS IPM Program and discussed in the last newsletter.

1. Most of the districts had a written pest management policy although the content and length varied.
2. Most districts did not have a pest management advisory committee.
3. All of the districts had someone who functioned as the IPM coordinator. Usually that person was the superintendent of buildings and grounds (or equivalent).
4. In most districts, the school board and district administration had little involvement with the district’s pest management beyond the initial approval of policy.
5. Most frequently, teachers and students were not involved in pest management. When they were, it usually involved expectations to adhere to published guidelines and/or serving on Pest Management or Health & Safety Committees.
6. Most frequently, the superintendent of buildings and grounds decided if pesticide applications were to be made.
7. Monitoring and inspections of school buildings was done most frequently by the pest control contractor, usually at monthly intervals.
8. Monitoring and inspections of school grounds were frequently done by school staff. Inspection intervals varied by district, site, and season.
9. In most districts, the contractor implemented pest management actions in school buildings.
10. Contractors and school staff roughly equally shared responsibilities concerning pest management actions on school grounds.
11. The pest management plans for landscaping (trees, shrubs, flowers, etc.) were usually more loosely structured than the plans for structures and turf. More districts had at least moderately organized pest management plans for the buildings than for the turf. However, some districts had highly organized plans for turf (especially the athletic fields).
12. Most districts had no or one certified pesticide applicator on staff.
13. Six of the 19 districts indicated that they did not use what they would consider unusual or innovative alternative pest management techniques. The rest listed 20 different techniques.
14. When asked about the impact of the state notification law on their pest management, the most frequent responses were little or no impact, costly increase in paperwork, and reduced pesticide applications. District 48-hour notification lists ranged from 0 to hundreds of people.
15. The most commonly mentioned pests were stinging insects, ants, and mice.
16. When asked why their district was practicing IPM, the most frequent responses included better pest management, health concerns, environmental concerns, and good citizenship.
17. Most of the districts considered their pest management programs successful. The most common reasons given were fewer pest problems and pesticide reductions.
18. The respondents listed 15 different obstacles to practicing IPM in schools. The most frequent responses were funds, heavy use of facilities, time constraints, and food in classrooms.
19. Several questions were asked concerning assessing needs. The most frequent responses indicated the need for improving communication and education among all of schools’ diverse constituencies.
20. When asked about finances, most respondents felt IPM was not any more expensive, especially in the long run, than conventional pest management. Some felt it was more costly but worth it. Two districts indicated that implementing IPM on school grounds was more difficult than in the buildings.

**EVENTS AND CONFERENCES**

There are two submission this month. If you would like to have your events mentioned, or know of a conference that may be of interest, please email me at kubista.kristi@epa.gov and it will be included in next month’s edition.

**Washington IPM in Schools steering committee**

The Washington IPM in Schools steering committee will be hosting a seminar at WSU Puyallup on July 18, 2003. Dr. Marc Lame from Indiana University will be presenting his Monroe Model Schools Project.
**4th Annual Indoor Air Quality Tools for Schools National Symposium**

The EPA will host its 4th Annual Indoor Air Quality Tools for Schools National Symposium on October 26-28, 2003, at the Grand Hyatt Hotel in Washington, DC.  
[http://www.epa.gov/iaq/schools/symposium.html](http://www.epa.gov/iaq/schools/symposium.html)

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**BIO OF AN ACTIVIST**

Dawn Gouge is an Assistant Specialist, Assistant Professor and Urban Entomologist at the University of Arizona. She spends most of her time as an extension agent, coordinating a vigorous Extension program in the area of urban entomology. Her programs are aimed toward client education and technical training. The projects she works on include a variety of urban based Integrated Pest Management (IPM) programs. Her clients include Extension Faculty, Pest Management Professionals, professional media and the general public.

In addition to doing extension work, Dawn Gouge also researches insect pathological systems and the development of biological and biorational pest management agents. She teaches three formal classes 596I Urban Entomology, 497A Insect Diagnostics for Practitioners, and 480/580 Urban IPM, and she supervises students involved in urban IPM research.

Her career began when she obtained her Bachelors in Applied Biology (where). Then received her PHD in Nematology/Entomology at the University of Reading, Berkshire, U.K. Dawn did her postdoctoral research as the USDA-ARS, at the Western Cotton Research lab, then obtained a position at Texas A&M, as an assistant professor and Extension Entomologist.

Because of her experience developing school curriculum for IPM we asked her to write an article on the success and importance of teaching children IPM in schools

**SCHOOLS NEED MORE BUGS**

Kids and bugs is a winning combination, it’s like kids and ice-cream, kids and French fries, kids and Disney Land. Kids love bugs and for the most part are willing to be amazed by them up close and personal.

Parents may shudder at the thought that their own offspring get to feel the soft step of Little Cody (tarantula), the pinch of Babe’s pedipalps (desert hairy scorpion), the kick of the crickets and even race Bess beetles and cockroaches pulling pennies along tables. The Urban IPM Team works with parents but it’s the unbiased, objective and above all inquisitive young minds we make our long-term investments in.

Schools involved in practicing IPM are often the most progressive, perhaps that is why we get so many requests from the teachers to bring in some bugs and contribute to classes with the children. There is never enough time in our schedules to fulfill all the requests, but when we can, we steal out of the lab, laden with arthropods, dissection gear and a bouncable microscope (believe me I can tell you exactly which dissecting scopes will and will not bounce).

We take as many live and handleable bugs as we can, we want the kids to contact and learn experientially. We take huge lubber grasshoppers for the kids to dissect, we race roaches, hunt scorpions with a black-light and have all manner of adventures in ponds, garbage piles and discarded tires.
Teachers can get very animated when we tie 3 kids together and ask them to walk like a 6 legged insect; the teachers want to try it. The kids usually work it out first. We bring butterflies emerging from cocoons and wrap kids up in sheets and staple them to boards. The idea is for them to wriggle out of their cocoon like a newly emerging adult insect. Be aware that teachers can get a little over enthusiastic wrapping kids up and duck taping them to boards, no matter how practical and fun is not acceptable.

We teach kids about arthropod communication and have them signal each other using vibration, and smell. My immense collection of Body Shop perfume was finally useful as we talk about pheromone attractants and give out pairs of scented wrist bands. The kids have to find the individual with the matching band.

We did have a rather hazardous game we called “Tiny Terminators” during which groups of kids are allocated labels indicating that they are plants, phytophagous bugs, predatory bugs or parasitic bugs. You have to be very careful telling a 7 year old boy he is a parasite and he has to hunt down suitable prey and stick a “your parasitized” sticker on their back; that’s all I’m willing to say about that. We emphasize how valuable these creatures are in our environment and how respectful we should be.

Taking malleable minds and planting wonder and a passion to learn about the natural world is a heck of a job. Personally why would anyone ever want to grow up when you can get a perfectly good job as an entomologist.

**POTENTIAL CURRICULUM**

In support of Dawn’s editorial, the following is a list of web sites that provide helpful information and ideas for creating curriculum for K-12th graders.

**In addition, feel free to contact Dawn, or the IPM centers at Texas A&M and Purdue University for further ideas.**

*Elementary Urban IPM Curriculum* http://www.pested.msu.edu/communitySchoolIpm/curriculum.htm

*Iowa State Entomology Index: K-12 Educators’ Recommended Sites:* http://www.ent.iastate.edu/list/k-12_educator_resources.html

*Academic Standards for Environment and Ecology*  
*Integrated Pest Management:* http://paipm.cas.psu.edu/schools/schoolEduc.htm

*Bio-Integral Resource Center: IPM Curriculum for Grades 9-12.*  
BIRC, P.O. Box 7414, Berkeley CA 94707,  
(510) 524-2567,  
FAX (510) 524-1758, E-mail ebirc@igc.org,  

*University of Minnesota: Radcliffe’s IPM World Textbook* http://www.ipmworld.umn.edu/ipmsite.htm

*Katterpillars (& Mystery Bugs) U of Kentucky* http://www.uky.edu/Agriculture/Entomology/ythfacts/entyouth.htm

*Best of the Bugs (U of Florida)* http://pests.ifas.ufl.edu/bestbugs/

*Using live insects in Elementary Classrooms (U of Arizona)* http://insected.arizona.edu/uli.htm

*IPM in Schools Activity Book*  
ADDITIONAL DATABASES
The following is a list of databases and resources that may help you when you begin to develop your classroom exercises. Though not specifically insect related, animals, plants, and phylogeny are all important to understand when teaching IPM.

*Animal Information Database*
http://www.seaworld.org/infobook.html

*Tales from the Hive*
http://www.pbs.org/wgbh/nova/bees/

*Phylogeny of Life*
http://www.ucmp.berkeley.edu/exhibit/phylogeny.html

*The D.C. Herbarium*
http://www.nmnh.si.edu/botany/projects/dcflora/dcherbarium.html

*Science Master’s Biology & Life Science Home Page*

*Encarta Schoolhouse Encyclopedia Lesson Collection*
http://encarta.msn.com/schoolhouse/default.asp

Jeffords, M.R., S.L. Post, R.N. Wiedenmann, C.S. Sadof, and C.P. Nixon. Set of 31 laminated cards with color photos and concise descriptions of beneficial natural enemies of insect garden pests. To be used in your yard or garden to help identify and distinguish the “Good Guys” from the bad guys. $8.00.


*Pests Have Enemies Too: Teaching Young Scientists About Biological Control.* 1995.

PUBLICATIONS OF INTEREST

Barker, Kenneth. 2003. Integrated Pest Management: Current and Future Strategies. CAST. Task Force Report # 140. To obtain a copy contact:

Council for Agriculture Science and Technology
4420 West Lincoln Way, Ames IA 50014-3447
(515) 292-2125, fax: (515) 292-4512
email: cast@cast-science.org
World Wide Web: http://www.cast-science.org

Calculating the True Costs of Pest Control.

http://www.epa.gov/region09/toxic/pest/school/index.html

CHEMICAL FREE METHOD OF HEAD LICE CONTROL

The University of Maryland will begin conduct field evaluations on a new, hexagonal comb that provides a simple, effective, non-chemical option for the detection and control of human head lice. We are seeking schools, daycare centers, or camps that have an active head lice problem. We will send a team to your location, will conduct on-site screening of children, and if desired, can provide materials and training for parents interested in trying this technique for treatment (elimination) of lice.

For more information please contact:
Barbara L. Thorne, Professor
Department of Entomology
University of Maryland
College Park, Maryland 20782-1173 U.S.A.
Email: bthorne@umd.edu
Telephone: 301-405-7947

AN INVITATION FOR FEEDBACK

Much of the information collected was obtained by your emails. To continue to improve this update we need your help. Please email kubista.kristi@epa.gov with additional funding sources, School news and web sites, conference information, questions you may be having, recommendations for columnists, and nominations for the featured activist and school/school administrators.

We hope that with your help we will provide an interesting resource for you and your activities with IPM in schools.

EDITORIAL

Gene Harrington and Bob Rosenberg are representatives of the National Pest Management Association (NPMA), a private organization that represents the pest control business. The NPMA and their justifications for creating a pest control operator’s certification program.

Industry IPM Program Moves Forward

Trying to develop a consensus definition of the term “school integrated pest management” or its more commonly used abbreviation, “school IPM” is a difficult, if not impossible task.

We speak from experience, having spent long and fruitless hours working closely with representatives of other industry groups and environmental organizations to define school IPM for school pest management legislation that was pending before Congress in 2001 and 2002. Although the measure, the School Environment Protection Act, ultimately failed, the exercise was incredibly instructive. During our meetings, we discovered that the pest management industry and environmental groups have relatively similar goals for a school IPM program. The gulf between the two parties is more a disagreement about the appropriate rhetoric rather than the sought after results.

Since the demise of SEPA a year ago, the National Pest Management Association has been working to develop a voluntary school IPM program. The program, QualityPro®School IPM, is an offshoot of a larger program that NPMA will be unveiling later this year. Companies seeking to become QualityPro companies will have to meet certain guidelines relating to environmental stewardship, advertising, contract clarity, employee background checks, drug-free workplace policies, and employee and vehicle safety and appearance. Most important, employees who apply pesticides will be required to pass an examination covering IPM, environmental stewardship, and customer relations. Companies may also qualify for the QualityPro®School IPM designation once their employees that treat schools for pests pass an additional exam on school IPM.
In setting the criteria for QualityPro and QualityPro*School IPM, we were reminded of the famous statement that Supreme Court Justice Potter Stewart made when describing the difficulties he encountered in trying to develop a definition of pornography. From the outset, we envisioned a scenario the QualityPro or QualityPro*School IPM designation would represent to consumers (i.e., homeowners, schools, other commercial and institution clients, etc.) that they could expect high quality service performed in an environmentally responsible manner. After months of meets and ongoing discussions, we’re confident that NPMA’s QualityPro programs do indeed meet the “I know it when I see it” test and will increase the level of IPM practiced in the field and improve consumer service.

The QualityPro programs are among the most far-reaching industry initiatives in that last 15-20 years. We’re confident that outside observers will be impressed once they review the QualityPro programs and the way in which they incorporate IPM and environmental stewardship. We encourage the U.S. Environmental Protection Agency and the academic and environmental communities to embrace QualityPro and QualityPro*School IPM and help them gain traction in the marketplace.

CONTACT INFORMATION

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703-308-7026 (fax)

Kristi Kubista-Hovis
EPA Intern, MPA/MSES candidate
Biopesticides and Pollution Prevention Branch
School of Public and Environmental Affairs
Bloomington Indiana
kubista.kristi@epa.gov
703-308-0171
SCHOOL IPM FUNDING OPPORTUNITIES in EPA REGION 5

EPA Focus on Children’s Health

Although the United States Environmental Protection Agency (EPA) is a strong supporter of the protection of children’s health from needless pesticide exposures and promotes Integrated Pest Management (IPM) in schools and daycare environments to reduce these exposures, finding Federal funding sources and securing funding to conduct school pesticide surveys, workshops, pilot projects, or implement school IPM programs certainly represents a challenge to both State agencies (Departments of Agriculture and State Cooperative Extension Services), advocacy organizations, State health departments, and State structural pest control associations. In the absence of Federal Legislation, the EPA typically does not have any Federal funds designated only in support of school IPM activities. Nevertheless, EPA does regularly solicit for grant proposals within various focus areas of health protection from various programs which will and have historically funded school and daycare IPM. The burden rests upon the person/agency seeking funding to explore all their possibilities for Federal funding and submit grant proposals when appropriate Request for Proposal announcements are disseminated. This document is provided as a guidance to assist and guide prospective grantees and as a starting point to secure Federal funding for applicable school/daycare IPM projects. The below recommendations are based on experiences in EPA Region 5 (Chicago) in supporting such projects over the past 11 years, as well as recommendations provided at the Region 5 (R5) School IPM Workshop (1998), IPM in Schools Michigan PREP (1999), and at the recent USDA IPM Symposium (Indianapolis, 2003).

EPA Region 5 and School/Daycare IPM

EPA Region 5 continues to be a strong supporter of the application of IPM within urban environments, especially as it relates to infants and children. All States within Region 5 have proactively been involved in school and daycare IPM programs for several years. Two States (Illinois and Michigan) have laws requiring IPM in schools and daycares, while two other States (Minnesota and Wisconsin) have laws requiring notification and pesticide applicator standards. With the assistance of several Universities and State agencies, Indiana continues to support a very strong voluntary approach to school/daycare IPM. Several recognized School IPM experts who reside in Region 5 have developed their own model programs which have been successfully applied to other States Nationwide. EPA Region 5 has been involved in all these State efforts as practically as possible from the start, often providing start-up Federal funding for State personnel employment, pesticide use surveys, IPM manuals, school IPM workshops for school administrators, sanitarians, and structural pest management professionals, and pilot projects.
Potential Federal Funding Sources in EPA Region 5

**General:** School IPM project proposals could logically be funded through several different environmental statues which may pertain to pollution prevention, indoor air, environmental education, or environmental justice. The amount of funding is variable, as are the solicitation dates and deadlines for the proposals. The advantage of these possible funding sources is that non-profit organizations may compete under some programs in addition to the normal State agencies. If the funding mechanism limits eligible applicants only to State agencies, nonprofits may still consider these as possibilities if they partner with a State agency, with the understanding that the funds must be awarded to that State, from where monies can be passed-through to the nonprofit organization. Match funding is either not required or minimal with these grants. All these grants are competitive, normally with a formal review process. Applicants should identify who the primary Region 5 contacts are for these grants and maintain regular communications with these individuals directly so as to keep current for Request for Proposals notification date. Discuss your ideas and projects with these contacts before submitting any proposals to obtain an idea of what they are looking for and structure your grant proposal to satisfy the requirements of the grant solicitation and the grantor priorities. Partnership with State agencies and organizations whenever possible, and build in measures of success for the project and its applicability Statewide or in other States. Demonstrate a need in your State and your competency to fill that need. Pay attention to detail in the grant proposal as some grant reviewers are very critical of those formatting and background details, sometimes beyond the actual value of the project.

In addition to those potential funding sources mentioned above, the Region 5 Indoor Air Program within the Air Division may also award grants for the minimization of pesticide aerosols in schools and daycares.

Region 5 maintains a web site which provides a summary of the grant programs offered. This site may be accessed from the internet following the below directions:

- Open page [http://www.epa.gov/region5](http://www.epa.gov/region5)
- link to left column under “Doing Business”
- scroll down to “Region 5 Funding Sources FY 2003” and click
- access each grant program individually below in page, or click on “printable chart” at top for information.

Developed in cooperation with Purdue University, Region 5 also provides a grant writing tutorial software program at [http://www.epa.gov/seahome/](http://www.epa.gov/seahome/)
EPA Region 5 Potential Funding Sources for School IPM

<table>
<thead>
<tr>
<th>Grant Program</th>
<th>Environment</th>
<th>Pollution Prevention</th>
<th>Indoor Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA R5 Contact Person</td>
<td>Margaret Millard 312/353-1440</td>
<td>Megan Gavin 312/353-5282</td>
<td>Phil Kaplan 312/353-4669</td>
</tr>
</tbody>
</table>

**Pesticides Program Section: [Annual State Cooperative Agreements]** The primary Federal funding mechanism available through the Pesticides Program Section consists of funds designated only for the State Lead Agency in each State for pesticide regulation. These funds can ONLY be awarded directly to this single State agency. The majority of these funds are designated specifically for either program or enforcement activities, and usually only for core activities in these areas under groundwater monitoring, worker protection, certification and training, endangered species, or enforcement. However, each Region is annually allotted “Discretionary” funds as well under each Program and Enforcement categories for direct noncompetitive awards to the SLA or for other uses as mutually agreed upon between Region 5 and the States. School IPM applicants from other State agencies, nonprofits, or other organizations may utilize this discretionary funding avenue to financially support projects with the advance approval and cooperation of the SLA and EPA. Applicants are advised to first verbally discuss their project proposal both with the SLA and EPA R5, and if both are willing to support the project, a written proposal and budget should be submitted to the SLA for approval. The SLA will in-turn include this discretionary project along with others for consideration to the Region 5 Pesticides Program. These projects may either be awarded as a grant tied with the annual Cooperative Agreement (one year project limited to Federal Fiscal Year start and end dates) or be awarded as a separate project grant (no Federal Fiscal Year restrictions), depending on the willingness of the SLA and EPA to manage the grant paper work. Depending upon the value of the school IPM project as determined by the SLA and R5, as well as competing discretionary projects from the same State and available funds, funding for school IPM projects approached in this way may stand a better chance of being funded rather than through other environmental programs as mentioned above.

**[Pesticide Environmental Stewardship Program]** Each EPA Region annually is provided Federal funds from EPA Office of Pesticides Programs (OPP) to award one grant (maximum $40,000) to a State agency or under the Pesticide Environmental Stewardship Program (a non-profit can work with a State agency but the application to EPA must come from the State agency). These grants are competitive among some 5-20 agricultural and urban proposals per Region submitted annually. The winning proposal is selected by the Region for funding based on both National and Regional criteria. Each Region also submits their second choice proposal received to OPP for possible competitive funding as well under PESP.
Potential Funding Sources for School IPM from R5 Pesticides Prog

<table>
<thead>
<tr>
<th>Grant Program</th>
<th>School IPM R5 Coordinator</th>
<th>Pesticides Environ. Stewardship Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA R5 Contact Person</td>
<td>Donald Baumgartner 312/886-7835</td>
<td>Heather McDonald 312/886-3572</td>
</tr>
</tbody>
</table>

Each EPA Region contact for the PESP grant program may be accessed through http://www.epa.gov/pesticides/grants/index.htm (Click on “regional initiative contacts” and then on “EPA regional office contacts”). This main web site also links to annual PESP solicitations.

Potential Federal Funding Sources in other EPA Regions

Other EPA Regions also maintain Federal funding programs similar to that described above for Region 5. In addition, some other EPA Regions have funded both State and nonprofit school IPM projects utilizing Urban Initiative funds which each Region has received annually for several years. This funding pot has not been utilized though by Region 5 for school IPM because the original focus of these monies was to detect and deter similar Methyl Parathion crises through the misuse of insecticides in low income urban residential environments. For further information about Federal funding opportunities, grant applicants are encouraged to contact the designated School IPM contact for that Region which has jurisdiction over your State of interest. Other Regional Offices may also maintain a web site similar to that described above for Region 5, from which more specific information about potential grant programs may be obtained. Applicants will need to do your homework and make the appropriate State and EPA contacts in order to compete with other potential grantees for available Federal funds.

The main web page for other EPA Regions may provide links to a list of potential funding sources offered within that particular Region. Directions are provided below to access other EPA Region main web pages, from where links may be provided to “grants”, “funding”, or similar key words.

- Open page www.epa.gov/
- Click on left margin “Where You Live”
- Select “EPA Regional Offices”
- Select Region of interest
- Look for links to “grants”, “funding”, or similar words.
EPA Regional Pesticides Sections also maintain their own web pages, from which grant information or contacts may be accessed. If you do not have this page bookmarked for your jurisdiction, you may locate the site using the directions below:

- Open http://www.epa.gov/pesticides
- Link to “Regions” on left column
- Select Region of interest.

### EPA Region School IPM Coordinators

<table>
<thead>
<tr>
<th>EPA Region</th>
<th>Primary School IPM Contact</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region 1</td>
<td>Robert Koethe</td>
<td>617/918-1535; <a href="mailto:koethe.robert@epa.gov">koethe.robert@epa.gov</a></td>
</tr>
<tr>
<td>Region 2</td>
<td>Tracy Truesdale</td>
<td>732/906-6894; <a href="mailto:truesdale.tracy@epa.gov">truesdale.tracy@epa.gov</a></td>
</tr>
<tr>
<td>Region 3</td>
<td>Clara Fuentes</td>
<td>215/814-3453; <a href="mailto:fuentes.clara@epa.gov">fuentes.clara@epa.gov</a></td>
</tr>
<tr>
<td>Region 4</td>
<td>Troy Pierce</td>
<td>404/562-9016; <a href="mailto:pierce.troy@epa.gov">pierce.troy@epa.gov</a></td>
</tr>
<tr>
<td>Region 5</td>
<td>Donald Baumgartner</td>
<td>312/886-7835; <a href="mailto:baumgartner.donald@epa.gov">baumgartner.donald@epa.gov</a></td>
</tr>
</tbody>
</table>
Potential Federal Funding Sources in other Federal Agencies

Other Federal agencies may also fund school IPM related projects. A starting point for investigating which grants are offered through other Federal agencies is provided below:

- Open page http://www.epa.gov/ogd
- Select program of interest from search box, or click on “Funding Opportunities”
- Click on “Federal Grants” for a list of grants offered by other Federal Agencies

Additionally, the recently finalized “Inventory of Federal School Environmental Health Activities” at http://yosemite.epa.gov/ochp/ochpweb.nsf/content/whatwe_tf_proj.htm through the EPA Office of Children’s Health, President’s Task Force Project, summarizes all the major Federal agencies and specific contacts who work/fund environmental projects in schools, including school IPM. Although created to compare and contrast Federal agencies who have either regulations or funded projects related to schools, as a foundation to avoid duplicate activities and better leverage future funding, this site is the only one which provides school contacts among twelve different Federal agencies.

EPA Region 5 School IPM Contact

Questions relating to this document may be directed to Donald Baumgartner, Pesticides Program Section, US EPA Region 5, Chicago, IL 312/886-7835 or baumgartner.donald@epa.gov