### **Back To School Organizing for** Safer Pest Management

by Kagan Owens

s children are back in school, so should school officials prepare a safe and healthy learning environment. One way to do this is to implement a safer pest management program, such as Integrated Pest Management (IPM), that uses alternatives to the prevailing chemical-intensive practices because of the health hazards such practices pose to children and school staff. IPM is a program of prevention, monitoring and control that offers the opportunity to elimi-

nate or drastically reduce hazardous pesticide use in schools.

School IPM is not a new approach to pest management. It is a concept that has been implemented in various communities, schools and government facilities for decades. Although there are no federal laws regarding school pesticide use and pest management, there is pending federal legislation, the School Environment Protection Act (SEPA), which has been introduced in Congress and passed twice by the U.S. Senate. There are also numerous state laws, local policies, resolutions and resources

that focus on the adoption of school IPM programs.

Currently there are 17 state laws that recommend or require schools to adopt an IPM program. In addition, 315 school districts and five individual schools have voluntarily adopted an IPM policy where no law mandates such programs, according to the recent Beyond Pesticides report, Are Schools Making the Grade? EPA and an additional number of states have developed materials to facilitate schools' implementation of IPM programs.<sup>1</sup>

#### Children's exposure to toxic pesticides

"Particular uncertainty exists regarding the long-term health effects of low-dose pesticide exposure," states the American Medical Association's Council on Scientific Affairs. "Consid-

ering these data gaps, it is prudent... to limit pesticides exposures ... and to use the least toxic chemical pesticide or nonchemical alternative."2

The vulnerability of infants and children to the harmful effects of pesticides has attracted national attention. EPA and the National Academy of Sciences, among others, have voiced concerns about the danger that pesticides pose to children. Children face higher risks than adults from pesticide exposure due

> to their small size, tendency to place their hands close to their face, engaging in activities on or near the ground, greater intake of air and food relative to body weight, developing organ systems, and other unique characteristics.

> Pesticide exposure can adversely affect a child's neurological, respiratory, immune and endocrine system.3 A recent study found organophosphate pesticides cause genetic damage linked to neurological disorders such as attention deficit hyperactivity disorder and Parkinson's disease.4 Several pesticides, such as pyrethrins and pyrethroids, organo-

phosphates and carbamates, are also known to trigger or exacerbate asthma symptoms.<sup>5</sup> Because most of the symptoms of pesticide exposure, from respiratory distress and flu-like symptoms to difficulty in concentration, are common in school children and may also have other causes, pesticide-related illnesses often go unrecognized and unreported.6

Studies show that children living in households where pesticides are used suffer elevated rates of leukemia, brain cancer and soft tissue sarcoma. According to EPA's Guidelines for Carcinogen Risk Assessment, children receive 50 percent of their lifetime cancer risks in the first two years of life.8

In 1999, the National School Boards Association along with the National League of Cities and Youth Crime Watch of America stated that "dangers in the environment," such as "potentially dangerous pesticides," are one of the "10 critical threats" that jeopardize "the health, safety, and future of America's children."



# How-to get your school to adopt an IPM program

School community members and activists, school policy decision makers, and school pest management practitioners all play vital roles in the adoption of an effective IPM program. Use the following information to advocate for a school IPM program or to improve the existing program.

Changing a school's pest management program requires perseverance. Since pest control is not often a large part of the school's budget, many administrators do not consider it a focus and are likely to be uninformed about their school's policy and any available alternatives.

- Work with your school to stop using hazardous pesticides and adopt alternative practices that have been adopted across the country.
- While the alternatives are being put in place, ask the school to provide staff and parents with prior notice before pesticides are used.
- Beyond Pesticides and state and local organizations can provide you with the resources necessary for developing, adopting and implementing a school IPM program.

## Integrated Pest Management (IPM) Defined

IPM is a pest management strategy that focuses on long-term prevention or suppression of pest problems through a combination of practices such as:

- regular pest population monitoring;
- site or pest inspections;
- an evaluation of the need for pest control;
- occupant education; and,
- structural, mechanical, cultural, and biological controls.

Techniques include such methods as:

- sanitation;
- pest-proofing waste disposal;
- structural maintenance;
- good soil health; and,
- other non-chemical tactics.

Least-hazardous pesticides should be selected only as a last resort, thus minimizing the toxicity of and exposure to any pesticide products that are used.

Whether you are a parent, community activist, pest manager/pest control operator, or school administrator or employee, the following outlines the steps leading to the adoption of a successful school IPM program.

1 Identify the school's pest management policy. The first step is to identify whether there are applicable state and local policies concerning school pesticide use and/or

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IPM and to find out who administers the pest control program – the school, the school system or a contractor. Contact the appropriate school personnel to find out if and how the applicable policies are being implemented by identifying what pest management controls the school is using, the pesticides used, and the notification program.

- 2 Educate yourself and evaluate the program. Gather information on the hazards of pesticide exposure and the increased susceptibility of children to the health effects of pesticides. Learn about IPM and what alternatives to chemical pest control methods are available. Identify additional steps that the school should be taking to protect children from pesticides and implement a successful IPM program.
- 3 Organize the school community. Identify and contact friends and neighbors, individuals, and organizations who care about or are affected by school pesticide use, including parents, students, teachers, school staff and board members, unions, doctors, environmentalists, local PTAs, outdoor clubs and religious institutions. Develop and present a proposed IPM policy (see Appendix C for a model policy) for adoption by the school or school district. PTA meetings are an excellent forum to arouse interest and encourage parents, teachers, and students to develop a pilot IPM project in their school (see Appendix D for the National PTA's resolution on school pesticide use and IPM). Create a district-wide workshop for pest managers, discussing IPM strategies and methods.
- Work with school decision-makers. Contact appropriate school official(s) and ask for an endorsement and passage of the proposed IPM policy. Provide them with information on the hazards of the chemicals currently being used and on safer alternative strategies. It is important that an IPM program include a written policy adopted

by the school district's board. This will ensure the program is institutionalized and will not revert back to a conventional program after the key activists, parent or school staff person leave the district.

Become a watchdog and establish an IPM committee. Make sure the school district is on track to improve its practices. The same individuals, organizations and staff members that were instrumental in getting the school to adopt the policy must also watchdog the school to make sure it is successfully implemented. Creating an IPM committee to oversee the program can be one way to ensure program implementation. Committee members should include parents, students (if age appropriate), teachers, school administrators, facilities, food service and landscape staff, any pest control company contracted by the school, and community environmental and public health organizations. The committee's main purpose is to assist with the development of implementation guidelines and recommend nontoxic and least hazardous strategies for pest management.

The information in this article is excerpted from Beyond Pesticides' and the School Pesticide Reform Coalition's report, Safer Schools: Achieving A Healthy Learning Environment Through Integrated Pest Management, which focuses on how schools nationwide are implementing IPM (downloadable for free at www.beyondpesticides.org/schools or \$5ppd for a hard copy through Beyond Pesticides).

#### State School IPM Laws

California Recommends Connecticut Recommends Florida Requires Illinois Requires Kentucky Requires Louisiana Requires Maine Requires Maryland Requires Massachusetts Requires Michigan Requires Montana Recommends

New Jersey Requires
New York Recommends

Pennsylvania Requires
Rhode Island Requires
Texas Requires
West Virginia Requires

#### **Endnotes**

- 1 U.S. EPA. 1993. Pest Control in the School Environment: Adopting Integrated Pest Management. 735-F-93-012. Office of Pesticide Programs. Washington DC. http://www.epa.gov/pesticides/ipm/brochure/.
- 2 American Medical Association, Council of Scientific Affairs. 1997. "Education and Informational Strategies to Reduce Pesticide Risk." *Prevention Medicine* 26:191-200.
- 3 Reigart, J. et al. 1999. Recognition and Management of Pesticide Poisonings. 5th edition. Office of Prevention, Pesticides and Toxic Substances. U.S. EPA. 735-R-98-003; Guillette, E., et al. 1998. "An Anthropological Approach to the Evaluation of Preschool Children Exposed to Pesticides in Mexico." Environmental Health Perspectives 106(6): 347-353; Schettler, T., et al. 2000. "Known and suspected developmental neurotoxicants." In Harms Way: Toxic Threats to Child Development. Greater Boston Physicians for Social Responsibility: Cambridge, MA; Repetto, R., et al. 1996. Pesticides and Immune System: The Public Health Risk. World Resources Institute. Washington, DC; Schettler, T., et al. 2000. Generations at Risk: Reproductive Health and the Environment. MIT Press: Cambridge, MA.
- 4 Winrow, C. et al. 2003. "Loss of Neuropathy Target Esterase in Mice Links Organophosphate Exposure to Hyperactivity." *Nature Genetics* http://www.nature.com/cgi-taf/DynaPage.taf?file=/ng/journal/vaop/ncurrent/abs/ng1131.html.
- 5 Box, S. et al. 1996. "A Systemic Reaction Following Exposure To a Pyrethroid Insecticide." Hum Exp Toxicol 15:389-90; Underner, . et al. 1987. "Occupational Asthma in the Rural Environment." Rev Pneumonol Clin 43:26-35; Weiner, A. 1961. "Bronchial Asthma Due To The Organic Phosphate Insecticides." Ann Allergy 15: 211-212; Reigart, J. et al. 1999. Recognition and Management of Pesticide Poisonings. 5th edition. U.S. EPA 735-R-98-003; Wagner, S. 2000. "Fatal Asthma In A Child After Use of An Animal Shampoo Containing Pyrethrin." Western Journal of Medicine 173:86-87; Field, M. 2002. Asthma the Breathtaking Disease. Johns Hopkins School Of Public Health. http://www.jhsph.edu/Magazine/Asthma.html; Eskenazi, B., et al. 1999. "Exposures of Children to Organophosphate Pesticides and Their Potential Adverse health Effects." Environmental Health Perspectives 107 (Supp 3):409-419; Senthilselvan, A., et al. 1992. "Association of Asthma With Use of Pesticides: Results of a cross-sectional survey of farmers." American Review of Respiratory Disease 146:884-887.
- 6 Reigart. 1999; National Environmental Education and Training Foundation. 2002. National Strategies for Health Care Providers: Pesticides Initiative Implementation Plan. Washington DC. http://www.neetf.org/pubs/NEETFImplement.pdf.
- Ma, X. et al. 2002. "Critical Windows of Exposure to Household Pesticides and Risks of Childhood Leukemia." Environmental Health Perspectives 110(9): 955-960; Buckley, J. et al. 2000. "Pesticide Exposure in Children with non-Hodgkin Lymphoma." Cancer 89(11): 2315-2321; Zahm, S. et al. 1998. "Pesticides and Childhood Cancer." Environmental Health Perspectives 106(Supp. 3): 893-908Gold, E. et al. 1979. "Risk Factors for Brain Tumors in Children." American Journal of Epidemiology 109(3):309-319; Lowngart, R. et al. 1987. "Childhood Leukemia and Parents' Occupational and Home Exposures." Journal of the National Cancer Institute 79:39; Reeves, J.D. 1982. "Household Insecticide-Associated Blood Dyscrasias in Children" (letter). American Journal of Pediatric Hematology/Oncology 4:438-439; Davis, J.R. et al. 1993. "Family Pesticide Use and Childhood Brain Cancer." Arch. Environmental Contamination and Toxicology 24:87-92; Leiss, J. et al. 1995. "Home Pesticide Use and Childhood Cancer: A Case-Control Study." American Journal of Public Health 85:249-252.
- 8 U.S. EPA. 2003. Draft Final Guidelines for Carcinogen Risk Assessment. EPA/630/P-03/001A Washington, DC. http://epa.gov/ncea/raf/cancer2003.htm.