

Ten Myths Behind Pesticide-Dependent Pest Management in Schools

Debunking opponents to school integrated pest management, pesticide bans and notification programs.

The pro-pesticide lobby has engaged in an all-out effort to convince local school districts that pesticides can be used safely in schools and therefore fully integrated into school pest management programs. One such group, Responsible Industry for a Sound Environment (RISE), distributed a letter containing misleading and inaccurate information on school pesticide use to 25,000+ school facility managers around the country.

To halt the pro-pesticide lobby from continuing to undercut community activists' efforts to reduce or eliminate pesticide use in favor of alternative strategies, Beyond Pesticides/NCAMP has developed this fact sheet as a guide to better understanding the issues. Notification of pesticide applications and elimination of toxic pesticide use where possible can be accomplished in our schools. Invalidate the pro-pesticide lobby's top ten myths with the facts.

MYTH #1

Pesticides are a vital ingredient to an Integrated Pest Management (IPM) program.

FACT #1:

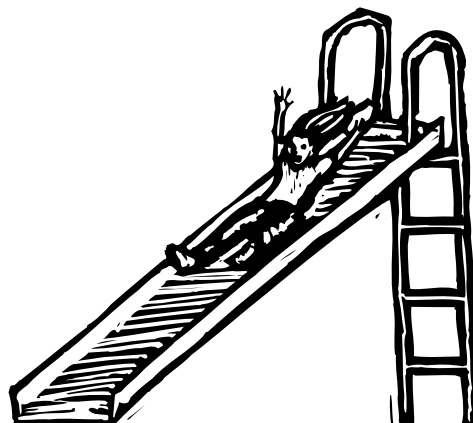
Those who argue that Integrated Pest Management (IPM) requires an ability to spray pesticides immediately after identifying a pest problem are not describing IPM. IPM is pest management that is sensitive to the health of students, school staff and the environment. Pesticide use is unnecessary because safer alternatives can successfully control pest problems. The goal of an IPM program is to minimize the use of pesticides and the associated risk to human health and the environment while controlling a pest problem. IPM does this by utilizing a variety of methods and techniques, including cultural, biological and structural strategies to control a multitude of pest problems. (See box on page 16).

Essential to the control of a pest problem are solutions based on preventing pest outbreaks to occur in the first place. For example, improving a school's sanitation can eliminate cockroaches and ants. Many techniques are relatively simple, such as mulching to prevent weeds or caulking cracks and screening openings where insects and rodents can enter a building. Constant monitoring ensures that pest buildups are detected and suppressed before unacceptable outbreaks occur.

Conventional pest control tends to ignore the causes of

pest infestations and instead rely on routine, scheduled pesticide applications. Pesticides are often temporary fixes, ineffective over the long term. Most common pests are now resistant to many insecticides. For effective pest control, it is absolutely necessary to identify the source of the problem, determine why the pest is present and modify its habitat. For example, since weeds tend to like soils that are compacted, the solution is not the temporary control achieved by killing them, but the adoption of practical strategies to make the soil less attractive to the weeds.

Alternatives to conventional hazardous pesticides are being implemented in over 100 school districts around the country and, thus, prove that alternatives work. Non-toxic and least toxic control products are a major growth area and new materials and devices are increasingly available in the marketplace.



MYTH #2:

Pesticides pose no risk to the health of children.

FACT #2

Student and staff poisoning at schools is not uncommon. Adverse health effects, including nausea, dizziness, respiratory problems, headaches, rashes, and mental disorientation, may appear even when a pesticide is applied according to label directions. Low levels of pesticide exposure can adversely affect a child's neurological, respiratory, immune and endocrine system. Of the 48 commonly used pesticides in schools, 22 can cause cancer, 26 can adversely affect reproduction, 31 are nervous system poisons and 16 can cause birth defects.¹

The General Accounting Office (GAO) in 2000 documented over 2,300 reported pesticide poisonings in schools between 1993 and 1996.² Because most of the symptoms of pesticide exposure, from respiratory distress to difficulty in concentration, are common in school children and may be assumed to have other causes, it is suspected that pesticide-related illness is much more prevalent.

EPA and Dow AgroSciences agreed in June 2000 to phase-out Dursban (chlorpyrifos), one of the most commonly used insecticides in schools, because of its high risks to children, even if used according to the label directions. The product has been marketed for the past 30 years with claims that it could be used safely. Even though EPA and the manufacturers of Dursban agreed to phase-out its use

Integrated Pest Management (IPM) is a managed pest management system that: (a) eliminates or mitigates economic and health damage caused by pests; (b) uses integrated methods, site or pest inspections, pest population monitoring, an evaluation of the need for pest control and one or more pest control methods, including sanitation, structural repairs, mechanical and biological controls, other non-chemical methods, and, if nontoxic options are unreasonable or have been exhausted, least toxic pesticides.

Least toxic pesticides include: boric acid and disodium octobrate tetrahydrate, silica gels, diatomaceous earth, nonvolatile insect and rodent baits in tamper resistant containers or for crack and crevice treatment only, microbe-based insecticides, biological, living control agents, and materials for which the inert ingredients are nontoxic and disclosed. The term 'least toxic pesticides' does not include a pesticide that is determined by the EPA to be an acutely or moderately toxic pesticide, a probable, likely or known carcinogen, mutagen, teratogen, reproductive toxin, developmental neurotoxin, endocrine disrupter, or immune system toxin, and any application of the pesticide using a broadcast spray, dust, tenting, fogging, or baseboard spray application.

in many settings, including schools, it can continue to be used until existing stocks are used up. The EPA chlorpyrifos announcement begins the process of getting high consumer and children exposure uses of Dursban off the market, but puts people at risk by not stopping its uses immediately.³

MYTH #3:

Without pesticides, pests pose a serious health and safety risk to children.

FACT #3:

The pro-pesticide lobby wants people to think that if we stop using toxic pesticides, our school buildings and lawns would be overcome by disease-carrying pests and weeds. However, this is not true. School pest problems can be effectively managed without toxic pesticides, as discussed in *fact #1*. Most insect and weed pests may be a nuisance, or raise aesthetic issues, but they do not pose a threat to children's health. Children should never be exposed to potentially harmful pesticides for this reason.

Increasingly the public is calling into question the use of pesticides for cosmetic results alone. The unleashing of these

toxic chemicals into our environment for aesthetic gain is responsible for countless human suffering and untold environmental consequence. In the words of Rachel Carson, "How could intelligent beings seek to control a few unwanted species by a method that contaminated the entire environment and brought the threat of disease and death even to their own kind? Future generations are unlikely to condone our lack of prudent concern for the integrity of the natural world that supports all life."

Toxic pesticides and certain pests do pose a health risk to children,⁴ which is why schools need to implement a comprehensive school IPM program. A school IPM program is established to prevent and manage pest problems, not to let pests run rampant.

MYTH #4:

School IPM programs are too costly for schools.

FACT #4:

According to the U.S. Environmental Protection Agency (EPA), "preliminary indications from IPM programs in school systems suggest that long term costs of IPM may be less than a conventional pest control program."⁵ Because IPM focuses on prevention of the pest problem, and properly monitoring to determine the extent of the pest problem, school IPM programs can decrease the amount of money a school will spend on pest control in the long-term. Some economic investment is usually required at the outset of an IPM program. Short-term costs may include IPM training, purchasing new equipment, hiring an IPM coordinator, or making preliminary repairs to a school's buildings. Chemical-intensive methods only prove to be less expensive in the short-term. The long-term health of our children is not worth short-term economic savings that just do not add up over time.

A well-known example of school IPM is the Montgomery County, Maryland public schools. The IPM program in Montgomery County covers 200 sites and reduced pesticide use from 5,000 applications in 1985 to none four years later, saving the school district \$1800 per school and \$30,000 at the County's school food service warehouse.⁶

In Indiana, Monroe County Schools implemented an IPM program that decreased the school's pest management costs by \$6,000 in two years. Pesticide use has reportedly dropped by 90% with the IPM program, and all aerosol and liquid pesticides have been discontinued.⁷

At Vista de las Cruces School in Santa Barbara, California, pest management was contracted out with a pest control company for \$1,740 per year for routine pesticide applications. After the school switched to an IPM program, their

costs were reduced to a total of \$270 over two years.

Albert Greene, Ph.D., National IPM Coordinator for the U.S. General Services Administration (GSA), has implemented IPM in 30 million square feet, approximately 7,000 federal buildings, in the U.S. capital area without spraying toxic in-

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secticides. Dr. Greene states that IPM, “can be pragmatic, economical and effective on a massive scale.”⁸

MYTH #5:

Pesticides are extensively tested and regulated. Before a pesticide product is approved for use, it must undergo over 120 government-mandated tests.

FACT #5:

Suggestions that pesticides in wide use have been subjected to full and adequate health and safety testing belies the widely acknowledged deficiencies in EPA’s pesticide registration process. In addition, the safety standard in pesticide law allows elevated rates of disease under a risk assessment-based standard. As a result, EPA has stated that no pesticide can be considered ‘safe.’⁹

Pesticides products contain formulations of a number of different materials, including active and inert ingredients, as well as contaminants and impurities. Additionally, pesticides, when subject to various environmental conditions, break down to other materials, known as metabolites, which are sometimes more toxic than the parent material. So-called inert ingredients can be as or more toxic than the active ingredient – active ingredients in other pesticides, toxic chemicals, chemicals regulated under other legislation, or hazardous wastes, solvents, propellants, wetting agents, petrochemicals and synergists. Inerts, often petrochemicals like toluene or xylene, are generally the largest percentage of ingredients of a pesticide product. Despite this, inert ingredients are treated as trade secret information and not disclosed on product labels. Contaminants and impurities are often a part of the pesticide product and responsible for the product hazards. Dioxin and DDT have been identified as contaminants in pesticide products.

Existing pesticide use patterns and a deficient regulatory process add up to inadequate regulation of pesticides is not protection of public health. The vast majority of all pesticide products registered for use by EPA and state gov-

ernments have never been fully tested for the full range of potential human health effects, such as cancer, birth defects, genetic damage, reproductive effects and neurological disorders, and endocrine disruption. Indeed, pesticides can be registered even when they have been shown to cause adverse health effects. Due to the numerous pesticide formulations on the market, the lack of disclosure requirements, insufficient data requirements, and inadequate testing, it is impossible to accurately estimate the hazards of pesticide products, much less lifetime exposure or risk. There is no way to predict the effects in children solely based on toxicity testing in adult or even adolescent laboratory animals, which is EPA’s procedure for evaluating adverse effects.

MYTH #6:

Each school board should only be responsible for maintaining a registry of individuals interested in being notified and not be overly burdened with providing universal notification.

FACT #6:

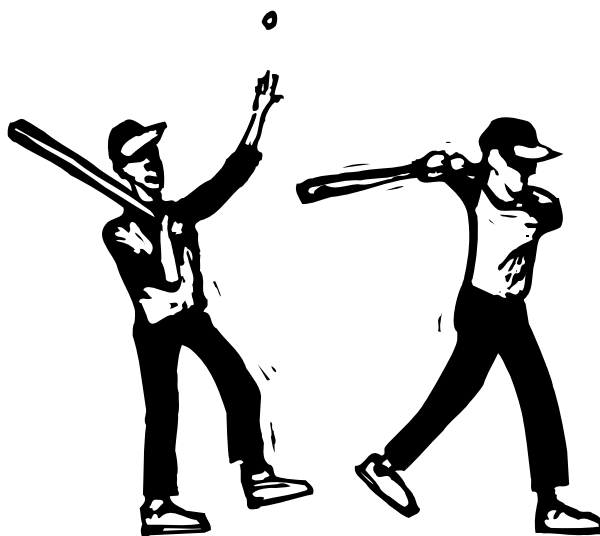
Parents are often kept in the dark about pesticide use at schools. Without notification, parents are unable to make important decisions about whether they want their children to go to school

when potentially hazardous pesticides have been applied.

Universal notification is a good way to make sure that all parents, guardians, children and staff are aware and warned about pesticide applications. Providing prior notification to all individuals attending or working at a school is less obtrusive to the school’s administrative staff. Uni-

versal notification does not require a separate database. Several school districts around the country, such as Ann Arundal County Public School system in Maryland, agree that it is much less cumbersome to provide universal notification. Many schools already send home notices and

school announcements about lice infestation, field trips, book fairs, and crime at school. Schools can simply send universal pesticide notices as they would other such announcements or they can be attached to notices already being sent home.



By providing prior written notification to all parties that would otherwise unknowingly be exposed to the chemicals and posting notification signs, affected parties can take the necessary precautions to avoid the exposure and potential harm it may cause.

Notification-based registries are a less effective means of notifying people and does not qualify as right-to-know because of its limited scope. Requiring that individuals place themselves on registries, affords only those who already know about toxic exposure the opportunity to be informed about pesticide use in the school. Registries are more costly and more resource consuming for school districts to implement. It may even require an extra staff person to keep the registry up to date and coordinate the notification.

MYTH #7:

Notification of pesticide applications are unnecessarily alarming parents and is a scare tactic by environmentalists.

FACT #7:

Parents and school staff have a basic right-to-know when pesticides are being used at school. By providing prior written notification to all parties that would otherwise unknowingly be exposed to the chemicals and posting notification signs, affected parties can take the necessary precautions to avoid the exposure and potential harm it may cause. Pro-pesticide lobbyists may be concerned that if parents and school staff know that a school is applying an EPA classified probable carcinogen, neurotoxin or other type of hazardous pesticide, they may be activated to advocate for alternative approaches that prohibit these chemicals. As discussed above, schools do not need to use toxic pesticides in the buildings or on the grounds where children spend their time learning and playing. IPM, if properly implemented, enables a safe learning environment for children, one that does not introduce unnecessary and routine use of toxic pesticides.

MYTH #8:

Parents and staff only need to be notified 24 hours prior to the use of pesticides at schools.

FACT #8:

Twenty-four hour prior notification of pesticide use does not provide enough time react. Prior notification should be made

72 hours in advance to make sure the information has been received by the student's parents or guardians and by school staff, allowing them to obtain further information regarding the pesticide application, and, if necessary, to make arrangements to avoid the exposure.

MYTH #9:

Schools should not have to notify parents and teachers prior to the use of baits, gels, pastes pesticide applications.

FACT #9:

As long as the bait, gel or paste falls under the "least toxic pesticide" definition (see box on page 16), schools do not need to provide prior notification. However, advance notification should occur for any formulation containing pesticide or other toxic ingredients that are volatile or toxic synergists. Just because a pesticide is applied in baits, gels and/or pastes does not mean these products do not contain a chemical that is a carcinogen, mutagen, teratogen, reproductive toxin, developmental neurotoxin, endocrine disruptor, or an immune system toxin.



MYTH #10:

As long as the pesticide is not applied while the area is occupied, once the students and teachers return to the area, the pesticide has dried and will not affect their health.

FACT #10:

Pesticides should never be applied when students or staff are, or are likely to be, in the area within 24 hours of the application. Pesticides residues can linger for hours, days and even months after an application is made. It all depends on the type of chemical applied and the conditions that may apply to its degradation. For example, airborne concentrations of seven insecticides were tested three days following their application in separate rooms. Six of the seven pesticides left residues behind through the third day.¹⁰ A 1998 study found that Dursban (chlorpyrifos) accumulated on furniture, toys and other sorbant surfaces up to two weeks after application.¹¹

¹ Beyond Pesticides/National Coalition Against the Misuse of Pesticides. 2000. *Health Effects of 48 Commonly Used Pesticides in Schools: A Beyond Pesticides/NCAMP fact sheet*. Washington, DC.
² U.S. General Accounting Office (GAO). 1999. *Use, Effects, and Alternatives to Pesticides in Schools*. RCED-00-17. Washington, DC.
³ U.S. EPA. 2000. *Chlorpyrifos Revised Risk Assessment and Agreement with Registrants*. Office of Prevention, Pesticides and Toxic Substances. Washington, DC.
⁴ Gurunathan, S., et al. 1998. "Accumulation of Chlorpyrifos on Residential Surfaces and Toys Accessible to Children." *Environmental Health Perspectives* 106(1).
⁵ U.S. EPA. 1993. *Pest Control in the School Environment: Adopting Integrated Pest Management*. 735-F-93-012. Office of Pesticide Programs. Washington, DC.

⁶ Schubert, J.D., et al. 1996. *Voices for Pesticide Reform: The case for safe practices and sound policy*. Beyond Pesticides/National Coalition Against the Misuse of Pesticides. Washington, DC.
⁷ Safer Pest Control Project. 1998. *Cost of IPM in Schools: A fact sheet from the Safer Pest Control Project*. Chicago, IL.
⁸ Greene, A. 1993. "Integrated Pest Management for Buildings." *Pesticides and You* 13(2-3). Washington, DC.
⁹ U.S. General Accounting Office (GAO). 1990. *Lawn Care Pesticides: Risks Remain Uncertain While Prohibited Safety Claims Continue*. RCED-90-134. Washington, DC.
¹⁰ Wright, C., et al. 1981. "Insecticides in the Ambient Air of Rooms Following Their Application for Control of Pests." *Bulletin of Environmental Contamination & Toxicology* 26.
¹¹ Gurunathan, S., et al. 1998.