



IPM Institute of North America, Inc.

*Harnessing Marketplace Power to Improve Health, Environment and Economics*

## **What is IPM?**

Integrated Pest Management (IPM) is a science-based, long-term strategy to combat pest problems without unnecessary pesticide use. Control methods can be cultural, biological, or chemical in nature and often include effective monitoring and inspection to detect pest problems. IPM methods are effective and minimize risks to human health and the environment.

## **Pesticides in Schools**

Onsite evaluations of more than 29 school systems in over 14 states indicated that nearly half were violating legal requirements or formal district policies related to pest management (Green et al. 2007). Policymakers in 35 states have acknowledged the special risks posed by pesticides to children's health. Nevertheless, we estimate that in more than 5,000 of the nearly 14,000 school districts in the US any individual may make a pesticide application without prior training, license, or certification (Hurley et al. 2013).

## **Health Risks to Children**

The American Academy of Pediatrics (2012) warns that, "High-dose pesticide exposure may result in immediate, devastating, even lethal consequences." In particular, asthma is epidemic among children in the US, impacting nearly 9.3% of school children nationally (Centers for Disease Control 2013). Children exposed to pests or pesticides in the first year of life were greater than two times more likely to develop asthma than children never exposed (Salameh et al. 2003). More than 10.5 million school days are lost per year due to asthma alone (Centers for Disease Control 2013).

Children's special vulnerability to pesticides includes both increased opportunity for exposure and increased susceptibility vs. adults (Goldman 1995, National Academy of Sciences 1993, US EPA 2002, US GAO 1999). Routes of exposure include hand-to-mouth, hand-to-ground and hand-to-floor behavior, and increased consumption of air, food and water. Increased susceptibility is a factor of underdeveloped and rapidly developing bodies including brain, nervous, endocrine, reproductive and other systems.

## **Community IPM**

Improvement is feasible and affordable. Pest complaints and pesticide use in schools and other public buildings have been reduced by up to 93% through Integrated Pest Management (IPM), with no long-term increase in costs in multiple well-documented studies (Gouge et al. 2006; Greene and Breisch 2002, Williams et al. 2005). Even basic measures that impact pest management, such as installing door sweeps at the base of exterior doors to prevent pest entry, can reduce pest complaints by up to 65% (F. Oi, Univ. of Florida, pers. comm., June 2007). IPM has gained recognition among the school community as a desirable approach, however, constraints to adoption include low awareness of the need and benefits of IPM; insufficient resources to apply available expertise and existing proven tools; poor enforcement of regulations and insufficient regulations in many states; competing priorities including budget shortfalls, deferred maintenance and security; and lack of national and regional coordination. School district maintenance, operations, custodial and food service staff represent front-line defenses against pest problems and need greater support including education, support tools and recognition for their key roles.

For more information, see: SCHOOL IPM 2020: A Strategic Plan for Integrated Pest Management in Schools in the United States (<https://ipminstitute.org/projects/school-ipm-2020/>)