

## **2016 SPOTLIGHT ARTICLE II**

### **Integrated Pest Management**

AAFA is committed to reducing asthma triggers in our nation's schools and promoting healthier environments for students. Reducing or eliminating the sources of asthma and allergy triggers at school results in healthier students and school staff. Keeping pests in check in the school environment is an important way to control allergens. Integrated Pest Management (IPM) is a science-based, commonsense approach for managing populations of disease vectors and public health pests.<sup>1,2</sup>

The US Environmental Protection Agency (EPA) recognizes the critical role that Integrated Pest Management (IPM) plays as a way to manage pests in classrooms, cafeterias, and school grounds using fewer pesticides and reducing asthma incidences. and recommends that schools use IPM. In the United States, more than 53 million children and six million adults spend a significant portion of their days in more than 120,000 public and private schools. IPM provides an opportunity to create a safer learning environment – to reduce children's exposure to pesticides as well as eliminate pests.<sup>3,4</sup> The US General Services Agency (GSA) is the primary agency responsible for distributing information about structural IPM.<sup>5</sup>

State laws and regulations may address Integrated Pest Management in schools or the laws and regulations may contain or establish other provisions relating to pesticide use in schools (such as restrictions or notification).<sup>6</sup> Generally, IPM procedures are affordable, effective and practical.<sup>7,8</sup> They include the regular inspection, monitoring and reporting of likely infestation areas, keeping up with repairs and maintenance of school buildings, sealing entryways where pests might enter into school buildings and utilizing traps and baits with a targeted application of pesticides. An important part of IPM is also the education of staff and students about these best practices so they can help in the efforts to keep the school pest-free.

1 Centers for Disease Control and Prevention. Environmental Health Services. Integrated Pest Management (IPM). <https://www.cdc.gov/nceh/ehs/elearn/ipm.htm> (accessed on 9/23/16)

2 UCIPM. What is Integrated Pest Management. <http://www2.ipm.ucanr.edu/WhatIsIPM/> (accessed on 9/23/16)

3 US Environmental Protection Agency. Introduction to Integrated Pest Management. <https://www.epa.gov/managing-pests-schools/introduction-integrated-pest-management> (accessed on 9/23/16)

4 US Environmental Protection Agency. Health Benefits of Integrated Pest Management in Schools. <https://www.epa.gov/managing-pests-schools/health-benefits-integrated-pest-management-schools> (accessed on 9/23/16)

5 GSA. Integrated Pest Management. <http://www.gsa.gov/portal/content/104931> (accessed on 9/23/16)

6 Environmental Law Institute. Integrated Pest Management in Schools: Overview of State Laws. <https://www.eli.org/sites/default/files/docs/ipm-overview.pdf>

7 Schools Save Money with Integrated Pest Management: A Beyond Pesticides Fact Sheet. [http://www.beyondpesticides.org/assets/media/documents/schools/publications/IPM\\_cost%20FS.pdf](http://www.beyondpesticides.org/assets/media/documents/schools/publications/IPM_cost%20FS.pdf) (accessed on 9/23/16)

8 County Health Rankings and Roadmaps. Integrated Pest Management for Indoor Use. <http://www.countyhealthrankings.org/policies/integrated-pest-management-indoor-use> (accessed on 9/23/16)

AAFA's 2016 State Honor Roll report shows that 38 states currently recommend that districts or schools use IPM techniques or ban pesticides. Thirteen of these 38 states are Honor Roll states. Please see Chart 2 on [page 12](#) for the full list. Studies have shown that IPM is very effective at creating healthier school environments.<sup>9 10</sup> For example, schools with IPM programs were found to have detectable pest allergens in only 14 dust samples as compared to non-IPM schools in which 44 percent of dust samples contained pest allergens.<sup>11</sup> In addition, IPM-treated schools had zero cockroaches in traps compared to 82.6 cockroaches in traps at non-IPM schools.<sup>12</sup> Having fewer pests leads to a reduction in asthma symptoms which decreases the number of missed sick days and makes students and staff more productive.

Because the use of pesticides with IPM is targeted, much less pesticide is needed, reducing exposure to harmful chemicals. One study showed that the schools that practice IPM used 99.9 percent less pesticide than schools using other pest control methods.<sup>13</sup> Not only were infestations addressed with IPM, but future infestations were thwarted by using a direct and efficient approach to pesticide.

IPM may require an initial amount of capital but such an investment pays off in the long run. For example, IPM includes making necessary repairs to school buildings and sealing any entryways where a pest could enter. Most schools will have to find ways to pay for this work. However, these changes will help a school save money over time. Keeping buildings sealed and in good repair makes them more energy efficient. In addition, money can also be saved by fixing costly problems, such as leaky pipes that waste water. Once these measures have been made, the costs of implementing IPM mostly involve paying for labor such as janitorial staff, which a school most likely is already paying for.

As our report showed, as of July 15, 2016, 38 states have implemented IPM policies in schools. To further encourage participation, the EPA has begun distributing grants to schools that want to use IPM. In March 2016, the EPA gave over \$500,000 in grants to establish mentorship programs between health departments and school districts and to conduct further research about IPM. To learn about the grant program, visit the EPA's website at <https://www.epa.gov/managing-pests-schools/school-integrated-pest-management-ipm-grants>.

9 Chambers, K.T., et al. 2011. The Business Case for Integrated Pest Management in Schools: Cutting Costs and Increasing Benefits. The IPM Institute of North America, Inc. 8 pp.

10 Gouge, D.H., L.Lame. and J.L.Snyder 2006. "Use of an Implementation Model and Diffusion Process for Establishing Integrated Pest Management in Arizona Schools." American Entomologist 2006: 190-196.

11 Williams, G.M., et al. "Comparison of Conventional and Integrated Pest Management in Public Schools." Journal of Economic Entomology 98 (4): 1275-83.

12 Nalyanya, G., J.C.Gore, H.M. Linker, and C. Schal. 2004. "German Cockroach Allergen Levels in North Carolina Schools: Comparison of Integrated Pest Management and Conventional Cockroach Control." Journal of Medical Entomology 46(3): 420-7.

13 Williams, G.M., et al. "Comparison of Conventional and Integrated Pest Management in Public Schools." Journal of Economic Entomology 98 (4): 1275-83.

On May 25, 2016, EPA convened 29 representatives of 17 national school, health and pest management associations and federal government agencies in Washington, DC to discuss ideas for implementing a set of principles promoting the adoption of IPM practices in the nation's schools. A meeting summary documents the event, captures key discussion and presentation points, and provides links to resources referenced.<sup>14</sup>

Communication and good relationships among custodians, food service staff, administrators, and teachers is important to gain support for IPM programs. This means that schools need to be educated about the benefits



of using IPM in their buildings to help improve the health and performance of children. Localized efforts aimed at adoption of IPM in individual schools and school districts is central to spread awareness about IPM and its benefits. It is an important way to keep students with asthma and allergies safe and included at school.

<sup>14</sup> US Environmental Protection Agency. Roundtable of School Integrated Pest Management. <https://www.epa.gov/managing-pests-schools/roundtable-school-integrated-pest-management> (accessed on 9/23/16)