Greetings from School IPM 2015!
Every day, 49 million children attend school in the United States, served by nearly seven million teachers and staff. But they're not alone. Schools are also frequented by a number of pests including cockroaches, mice, dust mites and more. Asthma is epidemic among children, impacting nearly 6% of school children nationally with rates as high as 25% in urban centers. House mice and cockroaches are potent asthma triggers.

Integrated Pest Management (IPM) is a prevention-based, highly effective approach proven to reduce pest complaints and pesticide use by up to 90% in schools and other public buildings. IPM practices such as sanitation and exclusion also improve food safety, fire safety and energy conservation. Our newsletter highlights real-life examples of IPM in practice and can help you start an IPM program in your school district. For more information, visit www.schoolipm2015.com.

Do I Smell a Stink Bug?
As autumn temperatures cool, brown marmorated stink bugs (BMSB) seek out winter homes. Much like lady beetles, boxelder bugs and cluster flies, BMSB prefer warm, dry habitat for overwintering. BMSB can be found overwintering in dead standing trees and in houses and other structures including school buildings.

Identification
Stink bugs are named for the odor they emit when disturbed or crushed.
What's New This Month

Looking for a School IPM resource? *Common Pests Found in Schools and Day Care Centers: Midwest Region* describes common pests and how to control them. The PDF booklet covers: ants, cockroaches, bees and wasps, flies, stored product pests, spiders, occasional invaders and mammalian pests.

Highlights

October is Children’s Health Month!

In 1992, the American Academy of Pediatrics established October as Child Health Month in order to focus national attention on children’s health issues.

One of many species of stink bugs, the BMSB is about 5/8 inch long and marbled brown in color. Identifying characteristics for this Asian species include white bands on the antennae and legs, a blunt forward edge of the head, a smooth thorax and dark banded tips on the forewings.

Eggs are oval, white to pale green and deposited in clusters on leaves. Nymphs progress through five immature stages before reaching adulthood, shedding their outer skin as they do so. Newly hatched nymphs have an orange abdomen with dark brown plates.

BMSB is an invasive pest in the US, originating in eastern Asia and arriving in the Mid-Atlantic region more than a dozen years ago. The insect has now been detected in 41 states. Fortunately, a number of native predators and parasites are taking advantage of BMSB as a resource, and may be slowing population growth. Asian native natural enemies are also under consideration for potential release in the US.

Crop damage and nuisance status

Severe crop damage has been reported in PA, NJ, WV, MD, DE and VA. Additional states reporting crop damage include WA, OR, NY, OH, KY, TN and NC. BMSB feeds on many types of fruit, vegetables and ornamental plants. Adults and nymphs cause pockmarks by injecting tissue-destroying enzymes and sucking juices from fruit and seeds. The injured flesh under the skin hardens, making produce unsellable in the fresh market.

The primary concern for schools is movement of the BMSB into buildings. BMSB rarely feed and do not reproduce during the winter. They do not sting, bite, spread disease or bore into wood, but rather become a nuisance including collecting in large numbers inside buildings.

IPM for BMSB

http://campaign.r20.constantcontact.com/render?llr=qp7vwzn6&v=001QII-Xe3DdxF0BnP2NL0Ys3iv7wkKu9RR_0L9Nbpel7Qmgx41GKS0v2GSe97Vt...
Children are particularly vulnerable to toxins because they process them differently than adults, have a more rapid metabolic rate and have more hand to mouth behavior.

The National Academy of Sciences 1993 Landmark Report estimates that 50% of lifetime pesticide exposure occurs in the first five years of life.

To learn more about children’s environmental health and view educational materials, click here.

To learn more about how School IPM can improve children’s health, click here.

The best way to avoid BMSB problems in schools is to exclude them. Screen openings on vents, utility pipes and window air conditioners. Seal gaps along fascia and ensure door sweeps ad seals are tight on exterior doors. Turn off unnecessary exterior lighting to reduce BMSB attraction to buildings at night.

To capture BMSB once inside, use a vacuum. Be aware the vacuum may acquire the odor of stink bugs if large numbers are present. A designated BMSB vacuum may be advisable in that case. BMSB can also be captured by placing a foil roasting pan filled with soap and water in affected rooms, darkening the room and shining a flashlight on the pan. BMSB will be attracted to the light and fall into the water.

Resources

- Webinar recording: All Bugs Good and Bad Webinar Series: Kudzu Bug and Brown Marmorated Stink Bug presented by Dr. Michael Toews, University of Georgia and Dr. Tracy Leskey, USDA Agriculture Research Servicers
- Brown Marmorated Stink Bug IPM Working Group
- How to Manage Pests in Gardens and Landscapes: Brown Marmorated Stink Bug, University of California Statewide Integrated Pest Management Program
- Stop Brown Marmorated Stink Bug, an initiative includes more than 50 researchers from 10 institutions across the U.S. working together to form a defense against BMSB.

 Tick-Safe-Schools

Last month, participants learned how to prevent tick problems in the school environment. Presenters included Thomas Mather, University of the Rhode Island Center for Vector Borne Diseases; Marcia Anderson, EPA’s School IPM Center of Expertise; Kathy Murray, Maine Department of Agriculture; and Christine Dunathan, Director of Institutional Advancement at Friends Community School. Creating Tick Safe Schools Using IPM, the second in a series, was presented on September 30, 2014 as part of the EPA School IPM Webinar Series.

Dr. Mather discussed tick borne diseases and prevalence, identification and the Tick Encounter web
An adult female blacklegged tick, engorged after a blood meal
Scott Bauer, USDA Agricultural Research Service, bugwood.org

April 6-8, 2015
2015 Imported Fire Ant and Invasive Pest Ant Conference
New Orleans, LA

Quick Links
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resource. This is a great resource center to learn how to be tick smart! For tips on avoiding questing ticks and steps to take when you find a tick, check out the School IPM April eNewsletter. Teaching children to conduct tick checks and emphasizing the importance of education will help considerably with tick management on school grounds.

TickSpotters is a service offered through the website where you can send in a picture for identification. Individuals have the opportunity to guess the tick species, currently with a 50% success rate. Dr. Mather also spoke about the importance of conducting a risk assessment. The number of ticks spotted per hour determines the risk level and what action needs to be taken.

Dr. Anderson reviewed prevention through landscape design. Remove leaves and vegetation weeds that might harbor ticks. Create a nine-inch buffer zone around buildings and plant deer resistant plants to minimize tick presence.

Dr. Murray discussed the importance of monitoring, how to incorporate tick prevention into your school IPM plan and personalized strategies for schools. "A tick IPM plan should include components for communication, monitoring and identifying ticks, landscaping to reduce tick encounters, setting action thresholds, record-keeping, and regular review and evaluation," said Dr. Murray. Recommended prevention methods include personal protective measures such as repellents, protective clothing, and body checks and landscape modifications to reduce tick habitat and discourage deer and mice. To learn more about the best method for your schools’ situation, check out information resources such as eXtension.org and Tickapp.tamu.edu.

Ms. Dunathan discussed real-world school tick issues and first-hand tick management challenges. She implemented three key lessons:

1. **Asses your site;** measure your risk before you take action.
2. **Educate** staff, parents and teachers about prevention and consequences of tick bites for
overall cooperation.

3. Get started and adjust as you go; understand that different challenges will arise, modify and select strategies that work best for your school.

Power point slides from the presentation will be available to view in the upcoming weeks by clicking here. Below is a list of upcoming webinars:

- **Bed Bugs in Schools**: December 16, 2014, 1:00 PM Central
- **Keeping Rodents Out of Your School**: January 27, 2014, 11:00 AM Central
- **Dealing with Nuisance Birds Around Schools**: February 24, 2015, 1:00 PM Central

**U.S. Department of Education Green Ribbon Schools Deadlines Approaching**

The U.S. Department of Education Green Ribbon Schools program recognizes schools, school districts and institutions of higher education that go above and beyond to accomplish three objectives:

1. Reduce environmental impact and costs, including water, energy use and transportation.
2. Improve the health and wellness of students and staff, including environmental health nutrition and fitness.
3. Provide environmental education that incorporates science, technology, engineering and math (STEM) and green career pathways.

The goal of the award program is to motivate education professionals to evaluate facilities and pursue opportunities to improve health and the environment, comprehensively and collaboratively with state health, environment and energy agency counterparts. Nominees must exhibit achievement in all three pillars.

Schools, districts, colleges and universities do not apply directly; state education authorities must nominate them. State participation is voluntary; candidates should let their state departments of education or state higher education authority know of their interest in being nominated. Deadlines to inform state education authorities of interest vary by state; click here for a list of state contacts to find out more information.

States submit final nominees to the US Department of Education by February 1st of each year. Each state may
nominate up to five pre-kindergarten through grade 12 schools or school districts, and a single post-secondary institution.

Honorees are announced annually on Earth Day, April 22nd and are invited to attend a national ceremony in July to receive a sustainable plaque and flag. To view a list of past winners, click here.