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. 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.

Safely Manage Feral Cats

Feral cats can be more than just a nuisance. Unvaccinated feral cats can transmit diseases to humans, including rabies, ringworm and toxoplasmosis. Cats can also kill birds and small mammals. A University of Georgia (UGA) study led by Kerrie Anne Loyd, a doctoral candidate at UGA’s Warnell School of Forestry, found that 30% of roaming house cats kill prey—two animals a week on average. When they move on, feral cats often leave fleas behind.

Domestic cats can be classified as indoor, limited-range, free-range or feral. According to the American Veterinary Medical Association (AVMA), feral cats are born outside and are never socialized in the first 24 weeks of their lives.

Lynn Braband, community IPM extension area educator for the New York State Community IPM Program, reports, “Having a colony of feral cats on a school campus should not be tolerated, from the human health perspective alone. The school board and administration needs to be solidly behind this.” The Armed Forces Pest Management Board created an IPM policy for stray animals on military installations, which could be modified for use in schools. Schools can also include a section...
on feral cat management in their IPM plan.

A number of IPM options are available:

**Habitat modification.** According to the University of Nebraska-Lincoln (UNL) Extension's *Feral Cats and Their Management*, "Habitat modification involves changing the landscape to reduce the availability of food, water and shelter available to feral cats inhabiting an area." If cats are removed from an area without eliminating these necessities, they are likely to return. Fix leaky pipes and downspouts that can lead to pooling water. Secure dumpster and garbage can lids and place trash in enclosed areas to deny cats access to food. Remove bird feeders or place them in locations at least ten feet from anything cats can hide under. Control rodent populations to reduce food sources. Educate staff about not providing food and water for feral cats. Make sure students know these cats are not pets, and can be aggressive or carry diseases. "In addition to the risks from unvaccinated cats," says Braband, "cat feces, as well as cat scratches or bites can transmit bacterial infections or illness."

**Exclusion.** Remove lumber, unused equipment and debris that might provide shelter. Seal holes or crevices in buildings, or use fencing or netting to keep cats from getting under buildings. One-quarter-inch mesh screen can be installed to block vents and other entry points into structures. "Rat walls," L-shaped mesh screens partially buried to discourage digging, can be attached to foundations or decks. Cat spikes can be used on ledges. Perimeter fencing should be six feet tall with a rounded overhang to prevent climbing.

**Trapping.** Only experienced professionals should trap cats. If you choose to move feral cats, work with a shelter or local rescue organization. Releasing cats elsewhere may be illegal, and cats can return or become trap shy, making it more difficult to catch them again. Cage traps can include a single or double door and should be at least 30 inches long. Ensure that traps have a wide handle guard to protect the handler during transport. Set enough traps to catch every cat in the immediate area. Place traps out of sight in locations where cats feel safe. Consider pre-baiting traps with the doors wired open for a few days to acclimate cats. Dry cat food, tuna, mackerel and sardines in oil make good baits. Trappers should be aware that skunks often enter cat traps.

**Fertility control.** The Humane Society of the United States advocates *Trap-Neuter-Return (TNR)*, in which feral cats are trapped, spayed or neutered, vaccinated against rabies and returned to their original territory. Although the cost to neuter and vaccinate a cat can be upwards of $100, some organizations provide reduced-fee services for feral cats. According to UNL Extension, "Models have estimated that more than 70 percent of a population of feral cats must be spayed or neutered before the population will decline." Braband adds that TNR programs are not desirable for school grounds because feral cats pose a health risk and should not live there. TNR also does not address disease and predation issues.

**Repellents and chemicals.** US EPA has registered several chemicals for repelling house cats, although they have not been proven effective against feral cats. Most are applied on the ground and emit a foul odor to cats. "Repellents would not be practical to use on a school campus," comments Braband. "They are designed for use on a micro level, such as around a small garden." Braband also notes that some locations may be so attractive to cats that they will disregard repellents. Special care
must be taken when applying chemicals around a sensitive school environment. There are no toxicants or poisons labeled for use on cats, making their use illegal.

**Frightening devices.** According to UNL Extension, "Most commercially available frightening devices have been ineffective at consistently keeping cats away." One option is motion-activated sprinklers, which spray cats when they walk in front of a sensor. Of course, these can only be deployed in areas free of student and staff traffic.

**Euthanasia.** Feral cat euthanasia is a very emotionally charged and highly debated issue. The AVMA accepts several methods of euthanasia for feral cats. Euthanasia should always be performed by a veterinarian or other trained professional. Schools should work with their pest management provider, local humane society or animal control agency to determine the best course of action.

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### Following Bed Bugs Home from School

Elite Pest Management services 22 school districts, encompassing about 350 schools throughout Michigan. Elite’s school bed bug service is innovative - Elite focuses on resolving infestations at home as the solution to detections in schools. "We don't recommend treatments at the school," says Ken Matheny, president of Elite. "If we can't find the source of the bed bugs at the school then we can't stop them from being brought in again, so there's no use wasting the school's money on treatments."

In their IPM service, Eco-Green Plus, Elite provides monthly inspections for a range of pests, as well as on-call services for bed bugs and other pest sightings. When a bed bug has been found, Elite begins monitoring the affected classroom. They place children's coats and backpacks in clear plastic bags each day, marking them with each child's name. Custodians check the bags for any bed bugs before returning the belongings to the children at the end of the day. This is repeated every day for a week or more until the source of the bed bugs can be isolated.

Once it has been confirmed that a particular student's belongings are a potential source, the school contacts the student's parents or guardians. Elite offers inspection and treatment services, and if a problem is confirmed, provides a treatment preparation form so the parents can prepare their home and belongings. "Most people are open to our suggestions," comments Matheny. "When we do get a parent who won't admit that their home might be the problem, we just have to stand our ground." Elite provides their services *pro bono* to families who can't afford them.

According to Matheny, "The first reaction to bed bugs is an emotional one because of the fear surrounding them. Part of my job is to calm the principal, teachers, and parents so we can effectively remove the
problem.” Elite provides fact sheets on bed bugs, such as *Four Places Bed Bugs Hide* and *The Do's and Don'ts of Bed Bugs*, and other resources.

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### New YouTube Channel Highlights IPM Video Shorts

The Colorado Coalition for School IPM recorded a series of 12 videos on school IPM topics. The videos run from one to three minutes long including proper food storage, pest proofing schools, monitoring for insects and performing a school IPM assessment. The Colorado Coalition created a [YouTube channel](https://www.youtube.com) to host the videos in one easily accessible place.

Dr. Deborah Young, professor at Colorado State University and co-director of the Center for Sustainable Integrated Pest Management, comments, “A lot of the things we show are common-sense practices that anyone can use. You can't necessarily teach skills in such a short video, but you can raise awareness and understanding.” She hopes the videos encourage viewers to seek out more information.

Young says YouTube videos were the obvious choice because “many people who want to learn how to do something will look up a tutorial on the internet.” The videos were easy to make, requiring only a camera and a basic video editing program.

The Coalition is looking for topics for future videos, which can be emailed to Young. The Colorado State University [school IPM program](http://www.ipminstitute.org/) also publishes newsletters and fact sheets.