

School Integrated Pest Management (IPM) Newsletter – December 2013



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

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Rodents: Get Them Out of Your School, House and Yard

The house mouse is one of the most troublesome and economically important rodents in the United States. They feed on human food and contaminate food with droppings and urine. They cause structural damage to buildings by building nests and gnawing; they chew on furniture and electrical wires. In addition, house mice can spread disease transmitting pathogens or parasites to humans and pets, including salmonellosis (food poisoning), ringworm, mites, tapeworm and ticks. They generate allergens, which are asthma triggers and should not be tolerated inside schools. Effective, low hazard options to eliminate these pest mice are available and have been presented in previous newsletter. Here we address the use of rodenticides in schools.



[The adult house mouse.maine.gov](http://The.adult.house.mouse.maine.gov)

Rodenticides in schools – only when all else fails!

Understanding baits

Baits are designed to be attractive food resources and additionally contain a toxin that proves deadly if a sufficient amount is consumed. There have been recent changes in rodenticide regulations to reduce rodenticide hazards to wildlife, pets and children. Manufacturers are now required to produce over-the-counter products that are sold as ready-to-use, disposable bait stations. Agricultural producers and professional pest management professionals have access to a wider array of rodenticide options, including restricted use pesticides.

Anticoagulant rodenticides

Anticoagulants cause blood-thinning in almost all warm-blooded animals. They are a relatively humane toxicant that causes little in the way of pain and suffering. The rodenticides are slow acting and animals may continue to be active for up to a week before dying. The animal dies of internal bleeding. Until recently there have been two groups of anticoagulants available: first generation (multiple doses are required to cause death of the animal) and second generation (may be fatal after only one feeding). However, because of the higher relative risk, second-generation anticoagulants are no longer allowed to be manufactured for sale to the general public. Consumers are now able to purchase only prepackaged, ready-to-use bait stations containing the first-generation anticoagulants (e.g., warfarin, chlorophacinone, or diphacinone) or non-anticoagulants (e.g., bromethalin or cholecalciferol).

Other rodenticides

There are several non-anticoagulant toxicants used in rodenticides. In general they pose higher relative risks to non-target organisms and are generally less suitable for use in schools.

There are restrictions on zinc phosphide, aluminum phosphide and magnesium phosphide based products. They are NOT generally permitted for use on school grounds (although there is an allowance for athletic fields under some circumstances).

Following ingestion, the zinc phosphide reacts with the gastric acid in the stomach. This causes the release of phosphine gas that causes damage to the small blood vessels, red blood cells, and blood vessels in the kidneys, liver, and lungs. Sadly, **multiple child fatalities have occurred due to accidents and misuse.**

Rodenticides have historically ranked second in the number of human exposures each year compared with the three other major categories of pesticides (American Association of Poison Control Centers).

There is generally a better way – challenge yourself to find one!

There are many steps and strategies you can take before resorting to use of a rodenticide bait, especially in school settings. See the following resources for more information.

Read more information about IPM of the house mouse in schools:

<http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/38106/em9062.pdf>

See the videos in this three-part series “IPM for Mice – Exclusion, Sanitation, Trapping”:

<http://www.sustainableplaces.org/general-ipm/mouse-control-exclusion>

<http://www.sustainableplaces.org/general-ipm/ipm-for-mice-sanitation>

<http://www.sustainableplaces.org/general-ipm/ipm-for-mice-trapping>

House mouse: http://cals.arizona.edu/urbanipm/pest_press/2004/dec.pdf

Mice: http://cals.arizona.edu/urbanipm/pest_press/2004/feb.pdf

“Sensible Steps to Healthier School Environments” Webinar Series

Join EPA for their new webinar series based on the [Sensible Steps Brochure](#) (PDF) (26pp, 1.75MB) and the [State School Environmental Health Guidelines](#). The webinars share low- and no-cost actions that schools can take to create healthier environments for students and staff. Each webinar features school district staff from across the country presenting real-life examples of successes. The target audience includes facility maintenance staff, school nurses, administrators, teachers, and other school personnel and stakeholders. Upcoming webinars:

December 17, 3-4 p.m. Eastern/ 1-2 p.m. Arizona: [Renovate Right: EPA's Renovation, Repair and Painting \(RRP\) Program at Schools](#)

Read more about Sensible Steps to Healthier School Environments Webinar Series, visit: <http://www.epa.gov/schools/webinars.html>

Upcoming Webinars and Events

Attend Free Sessions of the Green Strides Webinar Series

The [Green Strides Webinar Series](#) provides school communities the tools to reduce their schools' environmental impact and costs; improve health and wellness; and teach effective environmental literacy, including STEM, green careers, and civic engagement. Find more sessions for educators, facilities managers, and advocates weekly, click [here](#).

December 11, 2013, 4-5 p.m. Eastern / 2-3 p.m. Arizona: [Physical Health and Wellness Benefits of Participating in Archery \(DOI\)](#)

December 11, 2013, 7:30-9 p.m. Eastern / 5:30-7 p.m. Arizona: [ClimateChangeLIVE Education Resources Highlights – Part 2 \(USFS\)](#)

For more information about the EPA Schools program, visit: <http://www.epa.gov/schools/>

For more information about the Community IPM, visit: <http://www.extension.org/pages/23359/urban-integrated-pest-management-community-page>



For more information about School IPM in Arizona, visit: <http://cals.arizona.edu/apmc/westernschoolIPM.html>

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