



## Pests and Pesticides in Child-serving Facilities: An IPM Newsletter

### EPA Summarizes the Media Attention on the Need to Improve Indoor Air Quality to Reduce Viruses, Bacteria and Pollutants in Indoor School Environments Through Ventilation and Filtration!

Karen M. Vail

I typically place training material at the end of this newsletter, but I wanted to emphasize the need to improve ventilation and filtration in schools. Please see below the release from the Environmental Protection Agency (EPA) summarizing recent media releases on this subject. Hopefully, this will provide a greater understanding of the need to optimize ventilation and filtration and provide additional resources for those struggling to find the solutions needed to do so.

### Hot off the Presses! Indoor Air Quality in Schools in the News

Indoor air quality (IAQ) in schools finally is attracting the serious media attention it deserves. The recent flood of interest nationwide for improving IAQ in schools provides an incredible opportunity for EPA’s IAQ Tools for Schools program and stakeholders like you to promote proven IAQ management strategies that protect health and improve academic performance.

The stories below illuminate and amplify the importance of IAQ for creating healthier learning environments for students and staff. Please share these stories that feature several of the technical experts who are champions for our IAQ Tools for Schools Program.

**Washington Post:** [White House turns to air quality in latest effort to thwart coronavirus](#)

**March 29, 2022** – The Biden/Harris Administration promoted it’s plan to advance better ventilation and filtration to curb the spread of COVID-19 in a recent virtual event hosted by the White House’s Office of Science and Technology Policy (OSTP). During this event, Dr. Joseph Allen from the Harvard T.H Chan School of Public Health and EPA’s Tracy Enger joined a panel of national experts to amplify the urgency of IAQ in the built environment, especially in the nation’s schools.

### Special Points of Interest

If your school system is interested in participating in a tick monitoring demonstration or a fire ant bait demonstration, please contact Karen Vail, [kvail@utk.edu](mailto:kvail@utk.edu)

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**NPR's Short Wave: [Indoor Air Quality is Cool for Schools](#)**

**March 28, 2022** – Listen in on NPR's daily science podcast Short Wave, as NPR senior science and health editor Maria Godoy goes deeper to highlight the benefits of improved IAQ in schools, as well as the challenges posed in upgrading aging school buildings in the U.S. But wait, there's more! Check out this extensive article from NPR, [Better air in classrooms matters beyond COVID. Here's why schools aren't there yet.](#)

**Scripps National News: [Improved school ventilation has benefits beyond preventing the spread of COVID-19](#)**

**March 25, 2022** – This story, which was distributed to Scripps syndicated television networks nationwide, spotlights the IAQ Tools for Schools Program resources. It also features an interview with Anisa Heming from the US Green Building Council Center for Green Schools, that details updates schools have already made to air quality systems since the pandemic and outlines what more can be done. To hear more about the great work Anisa is doing to advance IAQ best practices in schools, view the webinar, [Solutions and Resources to Address COVID-19 in Schools: Establishing Lasting Improvements to Ventilation and IAQ.](#)

**NPR's All Things Considered: [Better ventilation means healthier students, but many schools can't afford to upgrade](#)**

**March 18, 2022** - Originally aired on NPR's nationally syndicated program All Things Considered, this story focuses on how better IAQ in schools improves academic performance and connects schools seeking to make IAQ improvements to funding opportunities under the American Rescue Plan. Longtime advocate of the IAQ Tools for Schools program, Dr. Joseph Allen provides profound insights on the data supporting IAQ improvements in schools. Dr. Allen goes into detail on that research in the webinar, [Rooted in Research: Reducing Virus Transmission, Improving Ventilation and Promoting Healthy IAQ in Schools.](#)

**Inhabit Podcast: [Putting the "I" in IAQ](#)**

**March 9, 2022** – On this podcast from the architecture firm Perkins & Will, host Erika Eitland features ways in which school building design impacts IAQ and connects with healthy schools advocates around the country to talk about ways to make an impact in their school districts. Hear more from Erika on the recent webinar, [Meeting Current School Health Challenges and Beyond: New Tools to Assess and Address IAQ Health and Safety.](#)

**E&E News: Greenwire: [EPA pushes school ventilation upgrades as mask mandates fall](#)**

**February 11, 2022** – This article based on the recent EPA webinar, [Solutions and Resources to Address COVID-19 in Schools: Establishing Lasting Improvements to Ventilation and IAQ](#), outlines two proven IAQ management strategies that the EPA has promoted to reduce pollutants and reduce the spread of viruses and bacteria in schools: ventilation and filtration.

**Questions?**

EPA offers free *IAQ Tools for Schools* resources—including the [School IAQ Assessment Mobile App](#)—to help schools maintain a healthy indoor environment by identifying, correcting and preventing IAQ problems. Learn more about the *IAQ Tools for Schools* guidance and access other valuable school environmental health resources at [www.epa.gov/iaq-schools](http://www.epa.gov/iaq-schools). If you have any questions about the *IAQ Tools for Schools* guidance, please contact the *IAQ Tools for Schools* Connector Coordinator at [iaqschools@epa.gov](mailto:iaqschools@epa.gov).

## Prevention Measures Needed to Help Avoid Tick Bites and Tick-Borne Disease

Karen M. Vail

In the last issue of this school IPM newsletter, you may recall that we discussed the presence of ticks on East Tennessee school properties. Several potential disease vectors were found, including the black-legged tick, lone star tick, and American dog tick. In a recent article in *Emerging Infectious Diseases*, the authors indicate that reducing tick populations did not correlate with the reduced human incidence of tick-borne disease. Thus, preventing tick bites, rather than reducing tick abundance, should be emphasized. It is necessary to avoid environments that support tick populations and to wear repellent or repellent-impregnated clothing when venturing outdoors when appropriate. For more information on preventing tick bites and reducing conducive conditions for ticks, please see PB1895, Managing Ticks on School Grounds at <https://extension.tennessee.edu/publications/Documents/PB1895.pdf>

As a reminder, the UT Urban IPM lab is conducting tick drags on school properties once a season for one year. We do not charge a fee for this service and will train school personnel to conduct tick drags so this process can continue after our participation in the first year.

**If you are interested in monitoring tick presence on your school property, please contact me at [kvail@utk.edu](mailto:kvail@utk.edu).**

### Sources:

Butler, R.A., K.M. Vail, J.G. Chandler and R.T. Trout Fryxell. 2021. PB1895 Managing Ticks on School Grounds. University of Tennessee Extension, <https://extension.tennessee.edu/publications/Documents/PB1895.pdf>

Keesing, F., S. Mowry, W. Bremer, S. Duerr, A. S. Evans, I. R. Fischhoff, A. F. Hinckley, S. A. Hook, F. Keating, J. Pendleton, A. Pfister, M. Teator and R. S. Ostfeld. 2022. Effects of Tick-Control Interventions on Tick Abundance, Human Encounters with Ticks, and Incidence of Tickborne Diseases in Residential Neighborhoods, New York, USA. *Emerging Infectious Diseases*, 28(5), 957-966. <https://doi.org/10.3201/eid2805.211146>.



On school properties, tick drags are conducted at the grass/wood interface, fence lines and around playground equipment where students, staff and others are likely to encounter ticks.

Credit: R. A. Baxter

## Fire Ant Bait Demonstrations to Begin in May

Karen M. Vail

Fire ants are a venomous pest known for the burning sensation produced when they sting humans and the resulting pustules. A small percentage of humans are hypersensitive to the fire ant venom and can go into anaphylactic shock when stung, and possibly die if the allergic reaction is not stopped. In addition to medical concerns, this pest reduces hay and other crop yields, causes calf blinding and death, reduces biodiversity, economically burdens nursery producers as they are required to treat for IFA to ship outside the quarantine, and causes other impacts. Fire ants are excellent predators. When preying on pest insects, they are considered helpful but are considered pests when preying on beneficial insects such as lady beetles.

Schools should limit fire ant presence on their campuses to protect their students, staff and visitors from fire ant stings. Jennifer Chandler and I will demonstrate the fire ant bait applications on two county school systems' properties in May. Extinguish® Plus Fire Ant Bait will be applied in a broadcast application and Advion® Fire Ant Bait as individual mound treatments. Demonstrations on fire ant baiting are another free service we provide because this work is supported through a USDA, NIFA, CPPM, Extension Implementation Grant (#2021-70006-35577) awarded to the University of Tennessee.

Baits work the best when fire ants are optimally foraging which typically occurs when temperatures are between 70 and 95 degrees F at **one inch below the soil surface**, although I prefer to apply the bait when temperatures are in the 80s. We suggest broadcasting a bait in the spring and fall. Unfortunately, finding that temperature sweet spot can be tricky in the spring as we go from cool quickly to hot.

**Table 1. Getting the Most from Fire Ant Baits**

- Baits should be applied between 70 and 85 degrees F when maximum fire ant-foraging occurs.
- In summer, apply baits in the evening. During the cooler evening, ants will quickly discover and carry off baits. If applied during the day, in extreme heat, baits quickly lose their effectiveness. Also, ants do not forage much during the day when it is too hot (>90 degrees F)
- Use only fresh bait, preferably from an unopened container. Once opened, baits should be used as soon as possible. Unopened containers may stay fresh for up to two years.
- To see if the ants are active and if the bait is fresh, place a small amount of bait and food (hot dog or potato chip) in separate locations next to a mound. If the bait is fresh and the ants are active, ants will begin removing it within 30 minutes. This is a good time to treat. If ants do not remove the bait, but feed on the hot dog or potato chip, then the bait is spoiled. If no ant activity is seen, it is not a good time to treat.
- Apply baits when no rain or dew is expected for at least five hours. Once the baits become soggy, they are not as attractive to the ants.
- Broadcast the bait, or apply it as directed around the mound.
- Avoid disturbing the ants or the mound right before applying the bait.
- Do not contaminate baits by storing them or applying them with fertilizer, other pesticides or odorous compounds.
- Follow the directions on the label. It is against the law to apply baits in areas not listed on the label.

Excerpted from PB1788

**If you would like a fire ant bait demonstration at your school, please contact me at [kvail@utk.edu](mailto:kvail@utk.edu).**

To learn more about fire ant management on school property, see PB1788 managing Fire Ants in and around Tennessee's Schools, <https://extension.tennessee.edu/publications/Documents/PB1788.pdf>. For a list of fire ant products registered for use on school property, see <https://extension.tennessee.edu/publications/Documents/W649.pdf>.

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For more information about IPM in Tennessee schools and other facilities, or to view past issues of *Pests and Pesticides in Child-serving Facilities*, please visit <http://schoolipm.tennessee.edu>

### NATIONAL IPM INFORMATION

eXtension's Pests in the Home  
<https://pestsinthehome.extension.org/>

National School IPM  
[schoolipm.ifas.ufl.edu/](http://schoolipm.ifas.ufl.edu/)

IPM in Schools Texas  
<http://schoolipm.tamu.edu/>

IPM Institute of North America  
[www.ipminstitute.org/](http://www.ipminstitute.org/)

School IPM PMSP—all schools IPM by 2020 [https://  
 ipminstitute.org/projects/school-ipm-2020/](https://ipminstitute.org/projects/school-ipm-2020/)

EPA schools  
<http://www2.epa.gov/managing-pests-schools>

For further information about the IPM program at your school or in your county, contact your county Extension Agent or the school IPM Coordinator. For county agent contact information, please visit <https://utextension.tennessee.edu/office-locations-departments-centers/>

## Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label and registered for use in your state.

## Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

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