

School IPM Outreach and Research Activities, NYS IPM Program, 2014

Project Leaders: Lynn Braband, Debra Marvin, Joellen Lampman, Jody Gangloff-Kaufmann, Matt Frye

Cooperators: Brian Eshenaur (NYS IPM Program). Jenny Kao-Kniffen and Joann Gruttadaurio (Department of Horticulture, Cornell University). Colleen Cavagna (Cornell Cooperative Extension of Allegany & Cattaraugus Counties). Sandra Van Vranken, Martin Williams and Chris Wainwright (NYS Department of Environmental Conservation). James Leach and Kaycee Cole (NYS Department of Health). Carl Thurneau and Laura Sahr (NYS Education Department). Brian Bentley (GST BOCES). Dominic Morales (SUNY-Delhi emeritus). Gene Synder (Alfred-Almond CSD), Andrew Jackson (Walton CSD), Suzanne Wheatcraft (Rochester City School District). Members of the Northeast School IPM Working Group and the National School IPM Steering Committee.

Abstract: NYS schools need assistance in reducing risks to children and others from both pests and the overuse of pesticides. In 2014, NYS IPM Program activities have resulted in school personnel becoming better informed and able to implement IPM in their school districts. A school IPM best management practices website was developed and piloted and evaluated in three states. School IPM outreach to rural schools was conducted in the Southern Tier and the Catskills. The state's public school districts were surveyed on their pest management policies and practices. NYS IPM staff initiated a blog with IPM stories of relevance to the state's schools and childcare facilities. NYS IPM Program staff made visits to more than ten schools trouble shooting specific pest-related situations.

Background and Justification: Pest management in schools has received increased attention in New York State and nation-wide. This is due to the critical need to decrease pesticide use to protect our children, who, by nature of their size and developmental stage, are at greater risk than adults. Yet, at the same time, we cannot compromise the quality of pest control because pests represent an equally important health hazard. Schools are especially challenging to manage because they include such varied settings as classrooms, cafeterias, laboratories, auditoriums, theaters, playing fields, playgrounds, and gardens. These areas are heavily used for a variety of purposes, including after-hours public meetings. Visitors, staff, and students are frequently in direct contact with the lawns, athletic fields, flowers, trees, playgrounds, and buildings on the school grounds. The New York State (NYS) pesticide notification law and "Safe Playing Fields" act have resulted in additional pressure on schools to reduce pesticide use. There is a concerted nationwide effort to have verifiable IPM in all of the country's schools.

Expanding School IPM Implementation within the Northeastern United States: a Best Management Practices Approach: While numerous school IPM resources exist, the need existed for succinct, yet comprehensive, guidance documents and training for practitioners. With funding from the NE IPM Center, NYS IPM staff evaluated, incorporated, and augmented existing resources in the development of a school IPM best management practices (BMP) website <http://www.northeastipm.org/bmps-for-school-ipm/>. They piloted the website in

train-the-trainer events in three states and systematically evaluated the website through surveys, focus groups, and training events.

Ninety-three percent of the participants in trainings and focus groups felt that the investment of time and training for the BMP would be worth the effort for schools. In addition, 89% reported a strong need for the resource, 81% felt the document was well organized, 86% reported the content was accurate, 80% felt it was easy to use, 87% felt it was flexible enough to adapt to different schools and 85% reported they thought it was a valuable tool for pest prevention and problem solving.

The project has led to improved resources and training which should increase the number of schools practicing high-level IPM, thereby safeguarding human health and the environment. The resources created are available on the website. The project team encourages schools to utilize pest prevention and pest monitoring tools to reduce reliance on pesticides and to select least-risk control methods to minimize risks of human exposure to pests and pesticides. Because of this project schools that practice IPM are likely to have improved indoor air quality and playgrounds and athletic fields that are safer for play.

Rural Schools Outreach: Rural schools are an often under served constituency relative to school IPM outreach. Modeled after our successful outreach to Adirondack schools in 2005, we partnered with regional CCE county associations and BOCES districts to organize outreach to schools in two other rural areas, the Southern Tier and the Catskills. In the Southern Tier, we initiated a demonstration project with the Alfred/Almond CSD with a focus on black medic in athletic fields and stinging insect management. The Catskills region site was at the Walton CSD, one of the Delaware Co. districts recently involved with a NYSTA-funded SUNY-Delhi athletic field management project. Workshops held at both school districts highlighted the respective projects. Pre- and post-tests and participant evaluations showed an increase in participants' knowledge and that the participants highly valued the information and interactions. This project increased the ability of school facilities staff to better manage school buildings and grounds while reducing risks to students and staff. It also made athletic directors aware of the need for proper management of sporting fields, increasing the likelihood of meaningful cooperation between AD's and facilities staff.

Statewide School IPM Survey: In 2001 and partnering with the NYS Health Department and the NYS Department of Education, the NYS IPM Program surveyed all of the state's public school districts and BOCES districts concerning their pest management policies and practices. The results have been helpful in guiding school IPM outreach activities. In 2011, we began planning a repeat of the survey in order to update this important database. The on-line survey was developed in 2012, promoted in 2012 and 2013, and distributed in 2013 and gathered information on pest management policies and plans, food policies, educational outreach and training, frequent pests, pest management techniques, turf management techniques, pest and pesticide-related complaints and incidents, pest management costs, Neighbor Notification Law, "Safe Playing Fields" Act, and sources of information. Analysis of the results occurred in 2014 with publication and distribution to occur in 2015. The following is the Conclusions section from the draft report.

Improvements from 2001 to 2013 included a large increase in the NYS public school districts that have a written pest management policy. There were also decreases in at least some types of pesticide application techniques notably baseboard spraying. Increased uses of aeration and overseeding in turf management were other positive

outcomes. NYS schools received few complaints on pesticide applications and related health concerns and had very few pesticide spills. These are positive indicators of effective pest management programs at schools. NYS schools report that both the NNL and Chapter 85 have resulted in the reduction of pesticide use. In general, schools have adapted well to the NNL.

Prominent needs that still exist concerning pest management in NYS schools include the pervasive issue of food in classrooms and other non-cafeteria locations. This highlights the need for increased, effective outreach to all school stakeholders. Additionally, a persistent gap in the pest management framework at NYS schools is the lack of pest management advisory committees. Approximately 25% of the responding school districts indicated that they still have regularly scheduled pesticide applications within instructional buildings. Many schools are having significant challenges in complying with Chapter 85 and still maintaining the quality of their grounds. Pest pressures, in terms of species, have largely remained consistent. A notable exception was the increase in goose problems.

Aspects of NYS school pest management programs that may need further investigation include the drop of schools reporting the use of pest siting logs. Schools may be utilizing other effective means of reporting pests, or this may be a gap in their IPM policies. The reported decreased use of structural modifications and vacuuming as pest management techniques may also need clarification. Additionally, the impact of the decrease in school staff that are certified pesticide applicators could be elucidated. Finally, future trends in the use of minimum risk pesticides by schools would be informative.

BOCES Health & Safety Staff Survey: NYS IPM staff began surveying, by phone, BOCES health & safety officers on their perceptions of the pest management related needs of the state's schools. The survey consists of 9 questions developed in consultation with our Community IPM team. To date, 11 BOCES districts, about 30% of the total, have been surveyed. The results will be used to provide input into our future school IPM outreach. Immediate results of the surveying have been developing a May 14 outreach workshop with Cayuga-Onondaga BOCES, the potential an outreach workshop or webinar with Wayne-Finger Lakes BOCES, and interest in goose control seminars. Other highlights, to date, include that schools need assistance in turf and grounds management. Most have concerns about the "Child Safe Playing Field Act" but not the Neighbor Notification Law. The development of cooperative bids for pest management or landscape services is a good idea, as is hosting webinars.

Statewide School IPM Committee: The NYS IPM Program organized a Statewide School IPM Committee in 2002. The twelfth meeting of the committee was held in October 2014 in East Greenbush, NY. Participants were from Cornell University, state Department of Environmental Conservation, state department of health, state education department, U.S. EPA, NYS Teachers Association, school districts, and industry. Discussions included presentations on outreach and research by both SUNY-Delhi and Cornell University on improving school athletic field turf management.

NYS School IPM Blog and Twitter: In May, NYS IPM staff initiated a blog and twitter account with IPM stories of relevance to the state's schools and childcare facilities. <http://blogs.cornell.edu/schoolchildcareipm/>. Through Twitter, [@NY_School_IPM](https://twitter.com/NY_School_IPM), we expanded contact with state-wide and nation-wide school, childcare, and health professionals. During 2014, blog entries included new websites on sports field management and EPA's school IPM outreach, mice, mosquitoes, wasps &

bees, invasive species and pollinators weeks, and an article on pesticide use regulations in schools.

Site Visits: NYS IPM Program staff made several visits in 2014 to schools trouble shooting specific pest-related situations. We made a site visit to an urban high school athletic field complex with a large Canada goose problem, interacting with the district and school groundskeepers and athletic directors. We are working with the district and schools to hold a goose on school grounds seminar in 2015.

After numerous complaints about cockroaches and rodents in a high school in Rockland County, three members of the NYS IPM program paid a visit to the school in March 2014. IPM staff met with the Superintendent of Buildings and Grounds and the schools pest management company representative to discuss the ongoing issue and to conduct an inspection of the school building interior to provide insight on controlling pests and preventing further infestation. The group conducted a thorough inspection of several classrooms, storage rooms, the boiler room and basement storage areas, as well as crawl spaces. Cockroaches appeared to be harboring in a basement storage room that contained old furniture, cardboard, wood, debris and some moisture. There was visible access to the outdoors and evidence of rodents was also discovered, although no live rodents were seen. We provided recommendations to the school on best management of the cockroaches, including discarding unused furniture, wood and cardboard. We recommended that workers in the basement bring their food trash to the first floor for proper disposal and advised the pest manager to use a good quality bait.

In September, a follow-up visit to the same school was made with the pest management contractor and director of facilities to discuss students being stung by yellowjackets. A NYS IPM staff member inspected the premises and identified two yellow jacket nests within the building and a flowering invasive plant that was attracting large numbers of stinging insects. Recommendations on how to reduce the number of yellow jackets on the school grounds were provided via e-mail.

In April 2014, an IPM educator visited the Kew-Forest School, a private elementary school in Queens, NY to teach second grade students about good and bad bugs. The students were involved in a project where each was doing a report on a specific arthropod. Our educator discussed each student's arthropod in detail and also talked about the many ways that insects affect everyday life.

Schools around New York State are facing issues and complaints about ticks on school property. Ticks can endanger the health of students and staff if they are bitten and contract one of the several diseases vectored by ticks found in NY. The Superintendent of Buildings and Grounds of one district on Long Island called the NYS IPM Program to ask about tick management. IPM staff visited the school, located in an area known to have deer and wild turkeys, to conduct a "flag and drag" inspection of the school fields. No ticks were found on a large, fenced-in field at the district's high school. A playground and field known for ticks at one elementary school was off limits on that day due to "field day", when parents and students enjoy field games. A follow up visit is planned for 2015.

The NYC Department of Education IPM Director asked a NYS IPM entomologist to cooperate and advise on an inspection of a Brooklyn high school experiencing an infestation of wharf beetles. Thousands of beetles, both dead and alive, were found in the cafeteria and surrounding hallways of the school. Inspection of all accessible wall and ceiling voids as well as the basement did not reveal their source. However, the

cafeteria is located in a newly constructed part of the building and the school is located less than a mile from the Coney Island oceanfront. Since further investigation would warrant an unfeasible deconstruction of walls of the new wing, it was concluded that beetles were originating from scrap or hidden/buried wood adjacent to or beneath the structure and the appropriate course of action would be to close the cafeteria during summer break and clean up beetles as necessary. Activity ceased by the end of August.

A school Superintendent of Buildings and Grounds on Long Island called to ask about yellowjacket control in the entryway of an elementary school in August of 2014. IPM staff visited to inspect several areas of yellowjacket and paper wasp nesting and activity. A week later two IPM staff returned with equipment to test the feasibility of vacuuming to remove yellowjackets from the entryway. Over 300 yellowjackets were successfully removed, however the colony was located among the roots of shrubs planted along the entry sidewalk, which hindered the process of removal. It was determined that where vacuuming to remove yellowjackets from a wall void has been successful, the same technique may not be reliable for ground nests in difficult to access places. Eventually, the school called upon their pest manager to apply a low-risk pesticide before the beginning of the school year.

In September 2014 an IPM staff member visited a school to inspect an athletic field and playground for ticks, as several complaints had been made by parents of children attending the school. A drag technique was used to criss-cross the athletic field and inspect the playground but no ticks were found. In communities that have local deer and wild turkey populations, ticks are abundant, especially in back yards. We concluded that ticks on school children may have been picked up elsewhere.

A NYS IPM staff member conducted multiple site visits to schools in the Capital Region with an Albany County Department of Health, Environmental Health Dept. inspector.

NYS IPM staff visited an Oswego County school district to scout for mice following the capture of five mice to determine if additional mice might be found in the building and ensure that all steps were being taken to prevent further issues.

Other Outreach: NYS IPM staff members are collaborating with Jenny Kao-Kniffen, Cornell University's Horticulture Department, with her USDA-NIFA-CPPM funded project, "Overseeding to Enhance IPM for School, Community, and Athletic Fields." Working on 50 school and community playing fields in New York, Maine, and Connecticut, this project will help identify constraints to adopting repetitive overseeding and the development of an effective approach to overcome these constraints.

NYS IPM Program staff co-organized a session on the state Child Safe Playing Fields Act at the 2014 Turf and Grounds Exposition in Rochester.

NYS IPM Program staff participated in a June meeting, organized by the NYS Department of Health and funded by the US EPA, of the Statewide School Environmental Health Program Steering Committee. The goal of this project is to promote sustainability and networking in promotion of school environmental health in NYS.

NYS IPM Program staff collaborated with members of the National School IPM Steering Committee in the promotion of school IPM implementation nationwide.
http://www.ipminstitute.org/school_ipm_2015/steering_committee.htm

