

# IPM Displays for the Public

## Project Leaders

Carrie Koplinka-Loehr, Coordinator, NYS IPM Communications Team  
Claudia Coen, Extension Associate, NYS IPM Program  
Jennifer Grant, Assistant Director, NYS IPM Program

## Project type and location

Public education, Tompkins County, Ithaca, NY, and also throughout the Northeast Region of the U.S. This two-year project was funded by the Regional IPM Grants Program—Northeast Region and will be completed March 31, 2006.

## Abstract

More than 75% of American households use pesticides; relatively few urban dwellers are aware of IPM and how to use it. To teach the public about IPM in an exciting way, we created two interactive IPM exhibits for public places. The first, a doll house called the "Pest House," allows visitors to find and correct ten pest problems. The second, "Mosquito Pinball," encourages visitors to earn points every time a mosquito-thwarting practice, such as emptying sources of water or wearing repellent, is accomplished.

To provide users with additional information, we wrote and produced ten "pest information cards," shaped like bookmarks, that accompany the Pest House display; two other publications accompany the Mosquito Pinball. Both displays are being hosted by the local Science Center, which receives up to 80,000 visitors annually. In February, 2005, we will market the exhibits to audiences in the Northeast who will use them as a focal point for IPM education, and ultimately increase people's use of IPM. In March the exhibits will debut at the NE IPM Regional Conference in Manchester, NH and in April we will deliver a related hands-on educational program about IPM to audiences at the Science Center.

By providing community members with opportunities to learn about pests and IPM, we are increasing their capacity to improve their personal health, the health of their yards and neighborhoods, and, ultimately, their quality of life.

## Background and Justification

More than three-fourths of American households use pesticides. According to the Environmental Protection Agency, about 80 million pounds of conventional-pesticide active ingredients were applied to homes and gardens in the United States in 1999 (EPA, 2002). A recent survey of urban apartment dwellers by the New York State Attorney General's Office found that, statewide, 69% of respondents applied pesticides in their own homes and 33% did so at least once a week (Surgan et al., 2002).

Adverse effect of pesticides on humans are still being uncovered. The Natural Resources Defense Council claims that at least 107 different active ingredients in pesticides have been found to cause cancer in animals or humans (1993). In addition to these effects, the repeated use of pesticides is known to cause pesticide resistance in weeds, insects, and diseases. According to Stapleton (2000), at least 535 insects have demonstrated resistance to insecticides.

IPM has been identified as an underutilized pest control approach. Despite citizens' lack of understanding of IPM, some studies indicate that citizens are thinking about pesticides, aware of alternatives, and willing to learn more. Consumers surveyed in New York were at least somewhat concerned about the use of pesticides in growing food (Burgess et al. 1989). According to a homeowner survey in Montana (Lajeunesse et al., 1996), 43% of those surveyed were "very interested" and another 38% "somewhat interested" in learning more about least-toxic methods of pest management. They considered the most effective methods for learning to be printed materials, hands-on participation, educational videos, and demonstrations by specialists.

When George Hamilton (2002) and Patricia Hastings (personal communication, 5/23/02) of Rutgers University investigated the possibility of "Making IPM a Household Word," they summarized four separate Northeastern surveys from 1989 to 2001 by Burgess, Hollingsworth, Govindasamy, and Mahar. Prior to the individual surveys, 73% of respondents in New York had not heard of IPM. Similarly, 61% of respondents in Massachusetts and 69% and 75% (respectively) of respondents in New Jersey had not heard of IPM. Conclude the authors, "Despite its benefits, IPM was identified as an underutilized pest control approach by the National IPM Forum sponsored by the Environmental Protection Agency in 1992. Notably one of the top ten constraints to the implementation of IPM was the 'lack of emphasis on urban IPM programs as a means to educate the general public.'"

Community IPM outreach in the Northeast generally does not focus on interactive displays for the public. One exception would be how the Pennsylvania IPM staff at Penn State, through an IPM curriculum, BugMobile, displays, publications, and other educational initiatives, have reached many thousands of homeowners and students.

Program staff at the New York State IPM Program, since the program's inception in 1985, have set up static displays at fairs, conferences, symposia, workshops, meetings and other venues. We have offered hundreds of thousands of people a handshake and our publications about IPM, but only in rare circumstances have we conveyed to our audiences a sense of excitement and wonder about integrated pest management itself. An exhibit that encourages the viewer to explore, interact, alter, and learn would be ideal.

To meet this goal, we built two interactive IPM displays that help teach people about Community IPM. This project addresses some of the priorities developed in 2003 by the Northeastern Pest Management Center's Community IPM Work Group and those set by USDA-CSREES:

- Priority #2: Develop outreach to homeowners, retailers of homeowner pest management products, and multipliers (e.g., libraries, teachers).
- Priority #8: Outreach on wildlife pest management, including landscaping do's and don't's.
- Objective 5.2 (of national priorities): Increase the capacity of communities, families, and individuals to improve their own quality of life."

## Original Objectives

1. Build two interactive IPM exhibits for displaying at indoor public places: one that emphasizes basic IPM concepts, and another that features biological control.
2. Create an interactive educational kit that will interest children and accompanying adults in IPM.
3. Deliver a hands-on program about IPM to audiences at the Sciencenter.
4. Reprint an introductory IPM brochure (*Get the Bugs Out*, NYS IPM 2003) and provide it with the IPM exhibits, to point audiences to more IPM information.
5. Complete an existing list of pest-resistant trees and shrubs (many of which are visible on the grounds and in the adjacent park). Design it as a brochure and print it for visitors to take home.
6. Distribute information about the exhibits and create web-based versions of the brochures to New York and Northeast audiences so that others may view them and increase their practice of IPM.

## Procedures

1. To teach the public about IPM in an exciting way, we created two interactive IPM exhibits for public places. The first, a doll house called the "Pest House," allows visitors to find and correct (with IPM solutions) ten pest problems. Each problem, such as branches too close to the house or food left on counters in the kitchen, can be rectified by moving a part that resets itself when

the visitor is done. This display combines two over-arching concepts—pest problems and pest solutions—into one exhibit.

We created a shipping box (which also functions as a display table) for the display and added a specialized brochure rack that holds the pest information cards.

The second exhibit, “Mosquito Pinball,” is a game that encourages visitors to earn points every time a mosquito-thwarting practice, such as emptying sources of water or wearing repellent, is accomplished. Two publications, *Get the Bugs Out—Safely*, an introductory IPM brochure from the New York State IPM Program, and *What’s all the buzz about mosquitoes?* accompany the Mosquito Pinball.

Both displays are currently being hosted by the local Sciencenter, a not-for-profit museum located in Ithaca, NY, that receives up to 80,000 visitors annually. Sciencenter education program managers and exhibit designers reviewed our ideas, made suggestions for prototype exhibits, created prototypes, and tested those prototypes before producing final exhibits.

2. & 5. At the outset of this project, the award was reduced (from \$15,000 to \$13,000) and we were asked to downsize the scope. We eliminated the interactive kit, planning instead to make the exhibits interactive, and we omitted the pest-resistant trees and shrubs brochure, upon the suggestion of John Ayers.

Instead, to provide exhibit visitors with useful written information, we wrote, designed, and produced ten “pest information cards,” shaped like bookmarks, that accompany the Pest House display. These are individual, double-sided bookmarks on ten pests: bats, mice, kitchen moths, ants, carpenter ants, mold, mosquitoes, raccoons, squirrels, and houseflies. These cards fit into the Pest House display rack and provide visitors with additional information. Of the 3,000 copies we printed, most will accompany the display; some will be used in media packets and school curricula kits to advertise the availability of the exhibits.

3. We met with Sciencenter staff and have planned an interactive child/adult IPM workshop to be held April 2005.

4. We reprinted the IPM brochure, *Get the Bugs Out—Safely*, and have been displaying it with the Pest House exhibit. *What’s all the buzz about mosquitoes* is a comprehensive brochure that accompanies the mosquito pinball exhibit.

6. In February, 2005, we will market the exhibits to audiences in the Northeast who will use them as a focal point for IPM education, and ultimately increase people’s use of IPM. In March the exhibits will debut at the NE IPM Regional Conference in Manchester, NH, and in April we will deliver a related hands-on educational program about IPM to audiences at the Sciencenter.

By providing community members with opportunities to learn about pests and IPM, we are increasing their capacity to improve their personal health, the health of their yards and neighborhoods, and, ultimately, their quality of life.

## Results and Discussion

Please see the above section for additional results. We are in the process of assessing impact by means of a “marked brochure” process. The IPM brochure on display with the exhibits at the Sciencenter contains a perforated reply card that users can mail in to request specific IPM brochures. We marked 600 reply cards with the signatory “S” of the Sciencenter so that as these cards are returned, we can trace their origin to visitors at the Sciencenter and this project.

For part of 2005, the Sciencenter will have access to our exhibits for programming with its classrooms, special volunteer instructors, and “Science in the City” classes.

Preliminary observations indicate a high degree of enthusiasm for the displays and “dwell times” of several minutes each. (An acceptable dwell time—how long a person spends at an exhibit—is generally 30 seconds). In the next few months, a NYS IPM staff member will observe

how visitors interact with the completed exhibits and with one another and will summarize these results in the final project report of 2006.

By Spring 2005 we will post an IPM Display web page and will be able to monitor the number of hits.

## References

- Burgess, R., J. Kovach, C. Petzoldt, A. Shelton, J. Tette. 1989. Results of an IPM marketing survey," New York State IPM Program, NYS Dept. of Ag. and Mkts., NYSAES Geneva. Cornell University, Fingerlakes Research, New York.
- CSREES—USDA National Goals, <http://cuaes.cornell.edu/CUAESWeb/national.htm>
- Curtis, J., and T. Profeta. 1993. After Silent Spring: The unsolved problems of pesticide use in the United States. Natural Resources Defense Council.
- EPA. 2002. Pesticide industry sales and usage: 1998 and 1999 market estimates. URL: [http://www.epa.gov/oppbead1/pestsales/99pestsales/market\\_estimates1999.pdf](http://www.epa.gov/oppbead1/pestsales/99pestsales/market_estimates1999.pdf)
- Hamilton, G., 2002. Public Awareness Campaign—Making IPM a 'Household Word.' Unpublished, unfunded grant proposal. Rutgers University, New Brunswick, NJ, 08901.
- Lajeunesse, S., G. Johnson, and J. Jacobsen, 1997. A homeowner survey: outdoor pest management practices, water quality awareness, and preferred learning methods. *Journal of Natural Resources and Life Sciences Education*, 26(1) 43-48.
- Northeastern Pest Management Center, Community IPM Work Group Regional Priorities, 2003: [http://nepmc.org/cwg/community/Priorities\\_oct03.html](http://nepmc.org/cwg/community/Priorities_oct03.html)
- Stapleton, D. H. 2000. The short-lived miracle of DDT. *The American Heritage of Invention & Technology*, Winter, 2000, pp 34-41.
- Surgan, M., T. Congdon, C. Primi, S. Lamster, and J. Louis-Jacques, 2002. Pest Control in Public Housing, Schools and Parks: Urban Children at Risk. Environmental Protection Bureau of the NYS Attorney General's Office.

## Samples of Materials

Pest information cards

Photos of exhibits