

impact

of the College of Agriculture and Life Sciences



Greater Harmony Between Agriculture and the Environment

School IPM in Phoenix and on Arizona Indian Reservations

Issue

Most schools in Phoenix and elsewhere in Arizona routinely spray their facilities with pesticides to control an assortment of fire ants, cockroaches, mosquitoes and bark scorpions. Each month the treatments are repeated as part of an outdated pest prevention program that doesn't work. Unacceptable pest populations remain a problem in these schools. At the same time, while the poisons are applied and reapplied, parents pull their children out of school for a day or two each month to avoid pesticide exposure. In April 2000, the Kyrene school district in metropolitan Phoenix tried another approach and brought in a team of specialists that included entomologists from the University of Arizona.

What has been done?

Three schools in the Kyrene district were chosen for a pilot Integrated Pest Management (IPM) project, to control pests while avoiding reliance on chemical pesticides. The schools concentrated their efforts (and capital resources) on identifying what the pests

were, finding where they came from and preventing their entry into buildings. The custodial and kitchen staffs also were mobilized to learn how to spot trouble. All of the openings around pipes and conduits were sealed, crawl spaces were closed off, and drains and building slabs were repaired to inhibit cockroaches. Trees were trimmed back and birds were encouraged to roost where their droppings wouldn't contaminate walkways and other high traffic areas. The new program initially came from Indiana University (IU). IU entomologist Marc Lame had done a pilot study in the Midwest and wanted to try a similar program in the desert Southwest.

Impact

The IPM final evaluation showed that the schools reduced their pesticide applications by 90 percent and kept pest populations below 85 percent of their original levels. The program has been expanded to 27 sites in the Kyrene School District.

In 2001 a new pilot program began on The Navajo Nation in three Bureau of Indian Affairs schools. The main pest issues at the sites included rodents, bed bugs and house flies. The final evaluation showed that the pilot schools reduced chemical pesticide use by more than 90 percent and also reduced pest incidence by more than 60 percent. The program has now been expanded to include all the BIA schools on the Navajo, Hopi and south Pueblo reservations. A new pilot program also began on the Gila River Indian Reservation in fall 2002.

The structural IPM program continues to grow: 1) UA faculty are currently working with the Arizona Structural Pest Control Commission on ways to provide pest control companies with certification that will recognize those who practice IPM techniques, and 2) a UA faculty member has been appointed vice president of the International Urban IPM Association.

Funding

University of Arizona Cooperative Extension
Environmental Protection Agency

Contact

Dawn Gouge, assistant specialist, entomology
Department of Entomology
The University of Arizona
37860 W. Smith-Enke Road
Maricopa, AZ 85239-3010 Tel: (520) 568-2273 ext, 223 FAX (520) 568-2556
Email: dhgouge@ag.arizona.edu