International Activities

There is a worldwide need for new public health pesticides. The IR-4 PHP Program works closely with domestic and international public and private entities to identify and support PHP tools for worldwide use.

Public Health Pesticide Database

The IR-4 Public Health Pesticides Program maintains the only public access database specifically dedicated to public health pesticides. Available through ir4.rutgers.edu/publichealth/publichealthDB.cfm, the PHP Database complements other public information on pesticide chemistry and toxicology by bringing together data on the efficacy of chemical tools against specific public health pests, PHP use patterns, and PHP regulatory status inside and outside the U.S.

For More Information about the IR-4 PHP Program...

Contact Program Manager Karl Malamud-Roam at 732.932.9575 x 4628, kmr@aesop.rutgers.edu, or visit the IR-4 Public Health Pesticides webpage at ir4.rutgers.edu/publichealth.html.

To learn more about the IR-4 Project visit ir4.rutgers.edu, or contact...

IR-4 Executive Director, Jerry Baron at 732.932.9575 x 4605 or jbaron@aesop.rutgers.edu

USDA

ars Agricultural Research Service
United States Department of Agriculture
National Institute of Food and Agriculture

DWFP
ARMED FORCES PEST MANAGEMENT BOARD
DEPLOYED WAR-FIGHTER PROTECTION

Department of Defense
Armed Forces Pest Management Board

The Public Health Pesticide Program

Sand fly

Facilitating registration of sustainable pest management technology for arthropods that cause human disease

The IR-4 Public Health Pesticide Program

The IR-4 Mission

The mission of the IR-4 Project is to facilitate registration of sustainable pest management technology for specialty crops and minor uses. IR-4 assists registration of public health pesticides as a minor use.

Public Health Pests & Public Health Pesticides

Mosquitoes, ticks, bedbugs, and sand flies are all Public Health Pests (insects and other arthropods) that can make people sick. In many cases, the sickness is due to pathogenic microorganisms that are transmitted (vectored) by the pests; examples include malaria, Lyme disease, West Nile fever, and dengue fever. In other cases, public health pests cause disease through allergic reactions or secondary infections after scratching breaks the skin. In all cases, the nuisance of a bite from a mosquito, bedbug, or other public health pest can affect the quality of life, even if pathogens are not transmitted.

Public Health Pesticides (PHP's) are some of the primary tools used to control public health pests, together with screens and other exclusion devices, habitat management practices to reduce their abundance, and bio-control through support for predators or parasites of the pest species. Public health pesticides include all chemicals, both natural and synthetic, that help control public health pests.

There are many types of PHP's including:

- toxicants - directly kill the pest
- repellents - drive pests away from the body
- insect growth regulators - impact growth and development of pests
- attractants - entice pests into traps
- other semiochemicals - products that influence pest behavior

The IR-4 Public Health Pesticides Program

Since 1963, the IR-4 Project has been the primary resource in the United States for facilitating registration of conventional pesticides and biopesticides on specialty food crops and non-food ornamental horticulture crops.

IR-4 serves as an intermediary between small-market users of pesticides, the Environmental Protection Agency (EPA), and the agri-chemical industry.

Initiated in 2008, the IR-4 Public Health Pesticide Program expands the mission of IR-4 to include the facilitation of the development and registration of new public health pesticides to protect the public from insects and other arthropods that transmit human diseases.

The PHP Program was created to help fill and maintain the toolbox of toxicants, repellents, attractants, and other chemical tools used to manage mosquitoes, ticks, sand flies, and other arthropods that transmit human or animal disease. Major partners include the U.S. Department of Defense's Deployed War-fighter Protection Program and the USDA-ARS.

A particular priority is ensuring that deployed military personnel are protected from arthropods that carry human disease and that the chemical tools used for this purpose have been completely screened for safety and efficacy.

The IR-4 PHP's Program also addresses:

- improved integration of chemical tools into broad Integrated Vector Management (IVM) strategies
- support for the regulatory needs of existing PHP's
- development of standard data dossiers and other methods to improve the PHP regulatory process
- research and outreach

Regulatory Support for New PHP's

The IR-4 PHP Program focuses on supporting new chemical tools through the regulatory review process, which ensures their safety, both in terms of human health and environmental protection. These new tools include active ingredients and newly formulated end-use products. IR-4 support includes regulatory assistance and limited in-house or contracted data collection. This public assistance is needed because availability

Asian tiger mosquito

of PHP products has been recognized as a public interest, but the small market that exists for public health pesticides does not always provide the financial incentives needed for private industry to undertake this work alone.

Regulatory Support for Existing Products

Many existing PHP's are facing new regulatory requirements, including data requirements associated with EPA registration review, endocrine disruption screening and the Endangered Species Act. As resources allow, the IR-4 PHP Program will support efforts to respond to these data requirements, as a means of ensuring an adequate supply of safe and effective chemical vector control tools. Included in the IR-4 PHP program for existing products is provision for regulatory support of EPA regulated biopesticides and other products that may require efficacy or additional data for registration.

Bedbug