

U.S. Environmental Protection Agency (EPA)

Pesticides

What is a pesticide?

A pesticide is any substance or mixture of substances intended for:

- preventing,
- destroying,
- repelling, or
- mitigating any pest.



Though often misunderstood to refer only to insecticides, the term pesticide also applies to herbicides, fungicides, and various other substances used to control pests.

Under United States law, a pesticide is also any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

What is a pest?

Pests are living organisms that occur where they are not wanted or that cause damage to crops or humans or other animals. Examples include:

- insects,
- mice and other animals,
- unwanted plants (weeds),
- fungi,
- microorganisms such as bacteria and viruses, and
- prions



Do household products contain pesticides?

Many household products are pesticides. All of these common products are considered pesticides:

- Cockroach sprays and baits
- Insect repellents for personal use.
- Rat and other rodent poisons.
- Flea and tick sprays, powders, and pet collars.
- Kitchen, laundry, and bath disinfectants and sanitizers.
- Products that kill mold and mildew.
- Some lawn and garden products, such as weed killers.
- Some swimming pool chemicals.

What is the balance between the risks and benefits of pesticides?

By their very nature, most pesticides create some risk of harm - Pesticides can cause harm to humans, animals, or the environment because they are designed to kill or otherwise adversely affect living organisms.

At the same time, pesticides are useful to society - Pesticides can kill potential disease-causing organisms and control insects, weeds, and other pests.

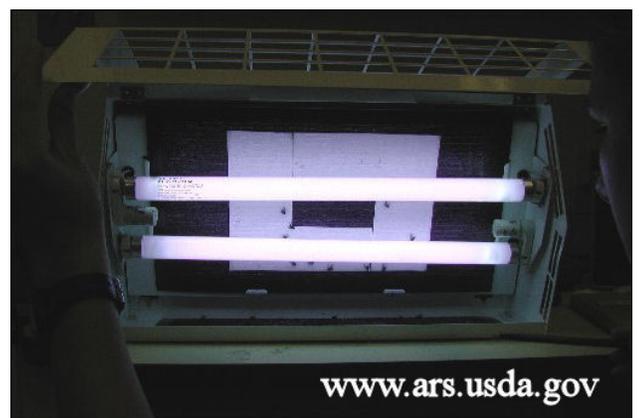
Are some pesticides safer than others?

Biologically-based pesticides, such as pheromones and microbial pesticides are becoming increasingly popular and often are safer than traditional chemical pesticides. In addition, EPA is registering reduced-risk conventional pesticides in increasing numbers.

What about pest control devices?

A pest control "device" is any instrument or contrivance (other than a firearm) intended for trapping, destroying, repelling, or mitigating any pest. A black light trap is an example of a device.

Unlike pesticides, EPA does not require devices to be registered with the Agency. Devices are subject to certain labeling, packaging, record keeping, and import/export requirements, however. In addition, the establishment where a device is produced must be registered with EPA who will assign an Establishment Number.



What substances are not regulated as pesticides?

The U.S. definition of pesticides is quite broad, but it does have some exclusions:

- Drugs used to control diseases of humans or animals (such as livestock and pets) are not considered pesticides; such drugs are regulated by the Food and Drug Administration.
- Fertilizers, nutrients, and other substances used to promote plant survival and health are not considered plant growth regulators and thus are not pesticides.
- Biological control agents, except for certain microorganisms, are exempted from regulation by EPA. (Biological control agents include beneficial predators such as birds or ladybugs that eat insect pests.)
- Products which contain certain low-risk ingredients, such as garlic and mint oil have been exempted from Federal registration requirements, although State regulatory requirements may still apply.

About EPA's Pesticides Program

EPA and the states (usually the State Department of Agriculture) register or license pesticides for use in the United States. In addition, anyone planning to import pesticides for use in the U.S. must notify EPA. EPA receives its authority to register pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

EPA's Pesticides work crosses many programs within EPA. The **Office of Pesticide Programs** along with the **Office of Prevention, Pesticides, and Toxic Substances (OPPTS)** work with **10 Regional Offices** and other EPA program offices on a wide range of Pesticide issues and topics, such as:

- Evaluating Potential New Pesticides and Uses
- Providing for Special Local Needs and Emergency Situations
- Reviewing Safety of Older Pesticides
- Registering Pesticide Producing Establishments
- Enforcing Pesticide Requirements



Types of Pesticides

Pesticides are often referred to according to the type of pest they control. Another way to think about pesticides is to consider those that are chemical pesticides or are derived from a common source or production method. Other categories include biopesticides, antimicrobials, and pest control devices.

Chemical Pesticides

Some examples of chemically-related pesticides follow. Other examples are available in sources such as Recognition and Management of Pesticide Poisonings.

Organophosphate Pesticides - These pesticides affect the nervous system by disrupting the enzyme that regulates acetylcholine, a neurotransmitter. Most organophosphates are insecticides. They were developed during the early 19th century, but their effects on insects, which are similar to their effects on humans, were discovered in 1932. Some are very poisonous (they were used in World War II as nerve agents). However, they usually are not persistent in the environment.



Carbamate Pesticides affect the nervous system by disrupting an enzyme that regulates acetylcholine, a neurotransmitter. The enzyme effects are usually reversible. There are several subgroups within the carbamates.

Organochlorine Insecticides were commonly used in the past, but many have been removed from the market due to their health and environmental effects and their persistence (e.g. DDT and chlordane).

Pyrethroid Pesticides were developed as a synthetic version of the naturally occurring pesticide pyrethrin, which is found in chrysanthemums. They have been modified to increase their stability in the environment. Some synthetic pyrethroids are toxic to the nervous system.

Biopesticides

Biopesticides are certain types of pesticides derived from such natural materials as animals, plants, bacteria, and certain minerals. For example, canola oil and baking soda have pesticidal applications and are considered biopesticides. At the end of 2001, there were approximately 195 registered biopesticide active ingredients and 780 products. Biopesticides fall into three major classes:

1. **Microbial pesticides** consist of a microorganism (e.g., a bacterium, fungus, virus or protozoan) as the active ingredient. Microbial pesticides can control many different kinds of pests, although each separate active ingredient is relatively specific for its target pest[s]. For example, there are fungi that control certain weeds, and other fungi that kill specific insects.

The most widely used microbial pesticides are subspecies and strains of *Bacillus thuringiensis*, or Bt. Each strain of this bacterium produces a different mix of proteins, and specifically kills one or a few related species of insect larvae. While some Bt's control moth larvae found on plants, other Bt's are specific for larvae of flies and mosquitoes. The target insect species are determined by whether the particular Bt produces a protein that can bind to a larval gut receptor, thereby causing the insect larvae to starve

2. **Plant-Incorporated-Protectants (PIPs)** are pesticidal substances that plants produce from genetic material that has been added to the plant. For example, scientists can take the gene for the Bt pesticidal protein, and introduce the gene into the plant's own genetic material. Then the plant, instead of the Bt bacterium, manufactures the substance that destroys the pest. The protein and its genetic material, but not the plant itself, are regulated by EPA.

3. **Biochemical pesticides** are naturally occurring substances that control pests by non-toxic mechanisms. Conventional pesticides, by contrast, are generally synthetic materials that directly kill or inactivate the pest. Biochemical pesticides include substances, such as insect sex pheromones, that interfere with mating, as well as various scented plant extracts that attract insect pests to traps. Because it is sometimes difficult to determine whether a substance meets the criteria for classification as a biochemical pesticide, EPA has established a special committee to make such decisions.

Pest Types

Pesticides that are related because they address the same type of pests include:

Algicides - Control algae in lakes, canals, swimming pools, water tanks, and other sites.

Antifouling agents - Kill or repel organisms that attach to underwater surfaces, such as boat bottoms.

Antimicrobials - Kill microorganisms (such as bacteria and viruses).

Attractants - Attract pests (for example, to lure an insect or rodent to a trap). (However, food is not considered a pesticide when used as an attractant.)

Biopesticides - Biopesticides are certain types of pesticides derived from such natural materials as animals, plants, bacteria, and certain minerals.

Biocides - Kill microorganisms.

Disinfectants and sanitizers - Kill or inactivate disease-producing microorganisms on inanimate objects.

Fungicides - Kill fungi (including blights, mildews, molds, and rusts).

Fumigants - Produce gas or vapor intended to destroy pests in buildings or soil.

Herbicides - Kill weeds and other plants that grow where they are not wanted.

Insecticides - Kill insects and other arthropods.

Miticides (also called acaricides) - Kill mites that feed on plants and animals.

Microbial pesticides - Microorganisms that kill, inhibit, or out compete pests, including insects or other microorganisms.

Molluscicides - Kill snails and slugs.

Nematicides - Kill nematodes (microscopic, worm-like organisms that feed on plant roots).

Ovicides - Kill eggs of insects and mites.

Pheromones - Biochemicals used to disrupt the mating behavior of insects.

Repellents - Repel pests, including insects (such as mosquitoes) and birds.

Rodenticides - Control mice and other rodents.

The term pesticide also includes these substances:

Defoliants - Cause leaves or other foliage to drop from a plant, usually to facilitate harvest.

Desiccants - Promote drying of living tissues, such as unwanted plant tops.

Insect growth regulators - Disrupt the molting, maturity from pupal stage to adult, or other life processes of insects.

Plant growth regulators - Substances (excluding fertilizers or other plant nutrients) that alter the expected growth, flowering, or reproduction rate of plants.

Pest Control Devices

What about pest control devices? EPA also has a role in regulating devices used to control pests. More specifically, a "device" is any instrument or contrivance (other than a firearm) intended for trapping, destroying, repelling, or mitigating any pest. A mousetrap is an example of a device. Unlike pesticides, EPA does not require devices to be registered with the Agency. Devices are subject to certain labeling, packaging, record keeping, and import/export requirements, however.



Emergency Information

Poison Control Center - 1-800-222-1222

Where can I get information on a specific pesticide product?

If you have questions concerning a specific pesticide product, contact the **National Pesticide Information Center (NPIC) either via telephone at 1-800-858-7378, or via e-mail at npic@ace.orst.edu**. For more information about NPIC, visit the NPIC Web site, <http://npic.orst.edu/>.

What is Integrated Pest Management (IPM)?



Integrated Pest Management (IPM) is a system of practices designed to choose the most economical and environmentally friendly course of action in controlling pests. Fundamental to IPM is the concept of "Know what the problem is before you apply pesticides." The principles of IPM can be used at home, in schools, in commercial settings, and in agriculture. Scouting the crops for pest infestation and comparing the cost of pest damage with the threshold cost of pesticide application helps to reach a decision on when to spray or not to spray. Crop rotation is also a practice in the IPM tool kit that can reduce the need for pesticides to control such damaging pests as the corn rootworm and soybean cyst nematode. Similarly, in a household or

school setting, determining what pests are present at what level and trying pest prevention methods such as eliminating sources of food, water, and shelter for the problem pests often will provide adequate control.

What is the Food Quality Protection Act (FQPA)?

This law amended the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). It strengthened the health-based safety standard for pesticide residues in all foods. It uses "a reasonable certainty of no harm" as the general safety standard. It requires EPA to consider all non-occupational sources of exposure, including drinking water and residential exposure. It requires evaluation of exposure to other pesticides with a common mechanism of toxicity when setting tolerances.

Fact Sheets

This listing of fact sheets contains general and chemical-specific information.

Health and Safety Fact Sheets include information such as safety precautions in applying pesticides to control mosquitos, product recalls and EPA's process for protecting the public from pesticide residues in food, including the special efforts taken to protect infants and children.

Antimicrobial Products to Disinfect Poultry and Other Facilities Against Avian (Bird) Flu - This Web page provides information about disinfectants that are available to help prevent the spread of avian (bird) flu in the United States.



Assessing Health Risks from Pesticides - EPA scientists and analysts carefully review test data to determine whether to register (license) a pesticide product or a use and whether specific restrictions are necessary. This fact sheet is a brief overview of EPA's process for assessing potential risks to human health when evaluating pesticide products.

Citizens Guide to Pest Control and Pesticide Safety -

This publication teaches consumers how to control pests in and around the home, alternatives to chemical pesticides, how to choose pesticides, and how to use, store, and dispose of them safely. It also discusses how to

reduce exposure when others use pesticides, how to prevent pesticide poisoning and how to handle an emergency, how to choose a pest control company, and what to do if someone is poisoned by a pesticide.

Counterfeit Pesticide Products for Dogs and Cats - EPA has ordered pesticide distributors and retailers in a number of states to stop selling counterfeit pet pesticide products which falsely contain EPA Registration numbers and labeling for the "Advantage" and "Frontline" lines of pesticides. This fact sheet includes detailed information, including photos of legitimate products.

Insect Repellent DEET - DEET is an ingredient used in many insect repellents. This page discusses EPA's actions concerning DEET, as well as tips on how to use DEET products safely.

Integrated Pest Management (IPM) and Food Production - IPM is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment. This fact sheet discusses the use of IPM in an agricultural setting.

Healthy Lawn, Healthy Environment: Caring for Your Lawn in an Environmentally Friendly Way - This small EPA brochure gives tips on working with nature to grow a lawn that is healthy while minimizing the use of pesticides. It also gives tips on the safe use of pesticides, when necessary, on choosing a lawn care service, and where to find more information on this subject.

Methyl Parathion and EPA's Actions - There have been incidents involving use of the highly toxic pesticide methyl parathion to get rid of insects in homes. Because of this illegal and hazardous use, EPA has taken steps to make methyl parathion more difficult obtain.

Mosquito Control Fact Sheets - Links to documents providing some basic information on mosquito control, safety precautions, and insecticides used for mosquito control programs.



Pesticide Consumer Alert - A tailored summary of the agency's chemical safety alert entitled, "Chemical Accident Prevention: Site Security".

Pesticides in Drinking Water Wells - This booklet is intended for people who drink well water, and who are concerned that pesticides might be present in that water.

Pesticide Product Recalls - EPA continually works to reduce the risks to human health and the environment by requiring pesticide registrants to report any potential problems with EPA registered pesticide products. EPA works with registrants to recall products whenever products are deemed faulty or substandard or could potentially cause injury to consumers or harm to the environment. Registrants often voluntarily recall products and reformulate or repair potential hazards.

Pesticide Safety Tips - Provide a list of important tips for the safe handling of household pesticide products.

Read the Label First is an interactive guide that explains the statements found on a pesticide product label. The explanations of these statements should provide consumers with a better understanding of the label contents.

Read the Label First: Protect Your Pets - Many common household products such as cleaners and pesticides could hurt a pet if not used and stored correctly. Always read the label first before you buy, store, and use household cleaners or pesticide products. Keep all products out of the reach of pets and children.

Retailers and Counterfeit Pet Products - EPA has ordered pesticide distributors and retailers in a number of states to stop selling counterfeit pet pesticide products which falsely contain EPA Registration numbers and labeling for the "Advantage" and "Frontline" lines of pesticides. This fact sheet includes detailed information for retailers, including photos of legitimate products.



Safety Precautions for Total Release Foggers - Total release foggers, also known as "bug bombs," are pesticide products containing aerosol propellants that release their contents at once to fumigate an area. These products are often used around the home to kill cockroaches, fleas, and other pests.

Spray Drift of Pesticides - Spray drift from pesticides can expose people, wildlife and the environment to pesticide residues that can cause health and environmental effects and property damage. For these reasons, OPP has been actively engaged in a number of initiatives to help prevent such problems.

Taking Care of your Pet During Flea and Tick Season - Taking care of your pets responsibly includes protecting them from fleas and ticks. Before purchasing and applying pesticide products to pets to control fleas and ticks, there is important information you should know.

Using Insect Repellents Safely - This resource suggests ways of choosing insect repellents, safely applying the repellent, reading the label for pesticide safety information, and avoiding ticks and Lyme disease.

Wood Preservatives

Pentachlorophenol (PCP) - Currently, EPA is reassessing pentachlorophenol (PCP) as part of its ongoing re registration program for older pesticides. Federal law directs EPA to periodically re-evaluate older pesticides to ensure that they continue to meet current safety standards.

Chromated Copper Arsenate (CCA) - CCA, also known as Wolmanized wood, is used on decks, fences and playground equipment to prevent wood decay. This Web site provides the current regulatory status, as well as technical and general information regarding the handling, use, and potential hazards associated with CCA-treated wood.

Creosote and its Use as a Wood Preservative - Creosote is a wood preservative used for commercial purposes only; it has no registered residential uses. Creosote is obtained from high temperature distillation of coal tar. It is used as a fungicide, insecticide, miticide, and sporicide to protect wood, primarily utility poles and railroad ties. EPA is currently reassessing creosote as part of its ongoing re registration program.

Protecting Children

Pesticides and Child Safety - With an estimated 73,000 children involved in common household pesticide-related poisonings or exposures in the United States in 2000, this document provides recommendations for preventing accidental poisoning, provides emergency numbers, and discusses basic first aid.

Protecting Children from Pesticides - This fact sheet describes the vulnerability of children to pesticides and some of the actions EPA has taken to protect children.

Ten Tips to Protect Children from Pesticide and Lead Poisonings around the Home (Also available in Spanish) - This publication provides resources and safety tips to prevent pesticide and lead poisoning.

Regulatory Action Fact Sheets

These fact sheets discuss how EPA regulates certain chemicals or types of pesticides and other regulatory actions.

Antimicrobial Pesticide Products - Antimicrobials are used to destroy organisms such as bacteria or fungi on inanimate objects. Antimicrobials can be found in products such as disinfectants and antiseptics. This page provides a description of the usage and types of Antimicrobial products. It also discusses EPA's regulation of antimicrobials.



Atrazine Interim Regulatory Decision Q&A's - EPA has completed its interim re registration eligibility decision for the pesticide atrazine. This Q&A document describes the basis for the decision on atrazine and how it will be implemented.

Azinphos-Methyl Risk Management Decision - EPA has accepted voluntary measures to reduce risks posed by azinphos-methyl to children, to agricultural workers, and to the environment.

Chlorfenapyr Review - After completing its review of the pesticide chlorfenapyr (Pirate) for use on cotton, EPA made the determination that chlorfenapyr did not meet the requirements for registration, and in response, American Cyanamid withdrew their Section 3 registration application. This Web site includes the human health and environmental risk assessments and the denial of registration decision memorandum.

Consumer Labeling Initiative (CLI) - CLI is a voluntary, cooperative effort designed to present clear, consistent, and useful environmental, safe use, and health information on household consumer product labels. Government and industry groups are working together to make it easier for consumers to find, read, and understand label information, thus enabling consumers to compare products and safely use the ones they select.

Consumer Products Treated with Pesticides - Many products, ranging from toothbrushes to children's toys, are treated with antimicrobial pesticides to get rid of bacteria. Before making public health pesticidal claims, such products must be approved and registered by EPA, or must be exempt from registration. There are products that have not been authorized to make health claims, which can mislead the consumer into thinking that the product is antibacterial.



EPA and FDA Streamline Food Packaging Regulation - Because of the practice of using pesticides within food packaging, the Food and Drug Administration's (FDA) responsibility of regulating food packaging would have overlapped with EPA's responsibility to regulate all pesticide products. However, a provision of the Federal Food, Drug, and Cosmetic Act (FFDCA), as well as action that EPA has taken, eliminates the overlap between the two agencies.

The EPA and Food Security - This page discusses EPA's primary contributions to food safety and responsibility within the United States and also contributions throughout the world. Some ways in which EPA ensures food security are through regulating the use of pesticides and setting pesticide residue tolerances.

Laws Affecting EPA's Pesticide Programs - EPA gains the authority to regulate the sale and usage of pesticides from two main laws: the Federal Insecticide, Rodenticide, and Fungicide Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FFDCA). These two laws, as well as other statutes that affect the Agency's pesticide programs, are described.

Methyl Bromide Critical Use Exemption (CUE) Process - This Questions and Answers document addresses concerns raised by prospective applicants for methyl bromide critical use exemptions.

Methyl Parathion and EPA's Actions - There have been incidents involving use of the highly toxic pesticide methyl parathion to get rid of insects in homes. Because of this illegal and hazardous use, EPA has taken steps to make methyl parathion more difficult obtain.

Methyl Parathion Risk Management Decision - EPA has accepted voluntary cancellation of methyl parathion's use on the crops, such as apples, which are eaten most by children. Because methyl parathion poses unacceptable risks to children, this step will help to reduce the pesticide risks to children through food.

NAFTA Guidance on Data Requirements for Pesticide Import Tolerances - On April 5, 2006, EPA announced in the Federal Register the availability of a guidance document describing the data requirements for establishing pesticide import tolerances in Canada and the U.S. Mexico is not participating in the program at this time. This fact sheet provides answers to questions the public may have about the NAFTA guidance document.

New Data Will Help Ensure Protection of Children - In an effort to further increase protections for infants and children, EPA is requiring registrants of pesticides thought to have neurotoxic effects to conduct acute, subchronic, and developmental neurotoxicity studies and submit the results to EPA.

Pest Control Devices - This page compares pesticide products and devices and describes some key statutory and regulatory requirements relating to devices.

Protecting the Public from Pesticide Residues in Food - This page discusses EPA's process for protecting the public from health risks caused by eating foods that have been treated with pesticides.

Safety Precautions for Total Release Foggers - Total release foggers, also known as "bug bombs," are pesticide products containing aerosol propellants that release their contents at once to fumigate an area. These products are often used around the home to kill cockroaches, fleas, and other pests.

Setting Tolerances for Pesticide Residues in Foods - To ensure the safety of the food supply, EPA regulates the amount of each pesticide that may remain in and on foods. This fact sheet briefly describes how EPA sets limits, called tolerances, for pesticide residues in food.

Spray Drift of Pesticides - The drift of spray from pesticide applications can expose people, wildlife and the environment to pesticide residues that can cause health and environmental effects and property damage. This fact sheet provides EPA's position on spray drift issues and a summary of responsibilities and activities of EPA and others.

Information Sources

General Information

Join the **pesticide electronic mailing list** to receive regular electronic updates on Agency actions relating to pesticide regulations. Updates are usually less than a page in length and designed to give stakeholders a brief overview of an action or issue along with links to the regulatory documents online (where available).

The **Federal Register Environmental Documents Web site** contains the full-text of selected Federal Register documents issued from the EPA or other Federal Agencies that concern environmentally-related issues, and beginning in October, 1994. These documents are further divided by topics such as Pesticides, Endangered Species, and Environmental Meetings. There are also topic specific daily listservs⁶ which will deliver the documents directly to your email box.

Pesticide Use Data - The Pesticide Market Reports are designed to provide contemporary and historical economic profile information on the U.S. pesticide producing and using sectors covered by regulatory programs mandated by FIFRA. Economic profile information is provided on a variety of topics, particularly the pesticide market in terms of dollar values and quantities of active ingredient.

The **Pesticide Management Resource Guide (PMReG)** is a guide to pesticide information resources at EPA and elsewhere which is designed to help national pesticide authorities around the world find information for use in pesticide management decision-making.

Publications from the Office of Pesticide Programs - This catalog lists many of OPP's publications. In most cases, the document is available online; if it is only available in hard copy, ordering information is provided.

U.S. National Profile on Management of Chemicals - The Intergovernmental Forum on Chemical Safety (IFCS) works to indicate current capabilities and capacities for management of chemicals and identify program needs in a national profile. This profile brings together information on all of the Federal chemical safety programs, and state and non-governmental activities, to be a domestic and international reference to inform specialists and the general public, and help guide US chemical safety activities and coordination efforts.

The **Global Information Network on Chemicals (GINC)** contains links to national and international chemical safety Internet sites. The GINC project is supported by the World Health Organization, the International Labor Organization, the United Nations Environment Programme, and the Organization for Economic Cooperation and Development. GINC's mission is to foster the generation and circulation of chemical-related information among all countries and international organizations for the promotion of chemical safety.

Hotlines

The **National Poison Control Hotline** was established to respond to emergency calls from concerned citizens about poison prevention. Housed in The National Capital Poison Center in Washington, DC, this hotline is manned 24 hours a day/7 days a week by registered nurses or pharmacists with backgrounds in critical care. All specialists have passed a national certification exam in toxicology. The Poison Center staff has access to a 24 hour interpreter service, with over 140 languages available, so callers who do not speak English are able to receive immediate help for emergency calls.

- 1-800-222-1222 (emergency only)
- 202-362-3867 (for administrative and materials requests)
- 202-362-8563 (TDD)

The **National Pesticide Information Center (NPIC)** provides objective, science-based information about a variety of pesticide-related subjects, including pesticide products, recognition and management of pesticide poisonings, toxicology, and environmental chemistry. NPIC also lists state pesticide regulatory agencies, and provides links to their Web sites. For more information, read the NPIC Fact sheet.

- 1-800-858-7378
- email at npic@ace.orst.edu

Endangered Species Protection Program (Pesticides) (ESPP) - a toll-free information line is provided to aid people striving to protect endangered species from harm that may result from the use of some pesticides. Questions relating to ESPP and the Endangered Species Act may be answered, and publications for students may be requested, Monday - Friday 9:00 - 5:00 (Eastern Time) via the toll-free number below. After hours, leave a message and a telephone number or address where you may be reached. Inquiries or comments may also be sent to the e-mail address below.

- 1-800-447-3813
- email: opp-web-comments@epa.gov

Information Centers

The **OPPTS Chemical Library** supports programs under the Toxic Substances Control Act (TSCA) and the Emergency Planning and Community Right-to-Know Act (EPCRA). The Library's special collections include works on specialty subjects such as pollution prevention, biotechnology, and risk assessment.

A list of other libraries in the **EPA National Library Network**

The **Office of Pesticide Programs' Freedom of Information Act** site provides information on FOIA and procedures for requesting a document from EPA through the Act.

The **Office of Pesticide Programs' Public Regulatory Docket** provides the public with access to pesticide related information produced by the EPA. Three individual dockets, Federal Register, Special Review, and Special Programs dockets, house regulatory notices, background documents and public comments on OPP activities.

National Service Center for Environmental Publications (NSCEP) is a central repository for all EPA documents with over 5500 titles in paper and/or electronic format, available for distribution. You can browse and search the National Publications Catalog and order EPA Publications online or by telephone at 1-800/490-9198.

Pesticide News Stories

Atrazine Effects Determination for the Barton Springs Salamander – August 21, 2006

EPA has met the first court-ordered deadline pursuant to a Settlement Agreement signed on August 22, 2005, with the Center for Biological Diversity and the Save Our Springs Alliance. The Agency is releasing its effects determination for atrazine as it relates to the Barton Springs salamander. EPA has concluded that atrazine is "not likely to adversely affect" the Barton Springs salamander. This is the first effects determination made under the provisions of the Fish and Wildlife Service's (FWS) and National Marine Fisheries Service's (jointly, Services') Counterpart Regulations.

The atrazine effects determination and other related documents are available at

<http://www.epa.gov/oppfead1/endorsement/effects/>. The Settlement Agreement in the Barton Springs salamander case is available at http://www.epa.gov/oppfead1/cb/csb_page/updates/bartons-agreemt.htm.

As background, on January 26, 2004, the Center for Biological Diversity and the Save Our Springs Alliance (jointly, plaintiffs) filed a lawsuit in federal district court for the District of Columbia alleging that EPA failed to comply with sections 7(a) (1) and 7(a) (2) of the Endangered Species Act (ESA) (CBD v. EPA, Case No. 1:04-cv-00126-CKK - District Court for the District of Columbia). The federal government negotiated a settlement in this case that committed the Agency to review the potential effects of six pesticide active ingredients on the endangered Barton Springs salamander and if adverse effects are expected, to initiate "consultation" with FWS under provisions of the ESA.

To determine atrazine's potential to affect the Barton Springs salamander, the Agency reviewed all available information (including species life history information, species range, toxicity data, and atrazine use information, among other things). The risk assessment and effects determination were conducted consistent with EPA's "Technical Overview of the Risk Assessment Process," (Overview Document) meaning that EPA has fulfilled its obligations under the Counterpart Regulations and does not need to enter into further consultation with FWS.

The Services have reviewed EPA's risk assessment process for endangered species and concluded that EPA can make "**not likely** to adversely affect" determinations without any further consultation, when that risk assessment is performed consistent with the procedures outlined in the Overview Document. If EPA determines that a pesticide is "**likely** to adversely affect" a species, EPA still must then enter into formal consultation with the Services.

The next deadline under this settlement agreement is May 2007, by which EPA must make effects determinations for two additional pesticide active ingredients.

Lindane Voluntary Cancellations Requested – August 28, 2006

EPA has received formal requests from the registrants to voluntarily cancel their products containing the pesticide lindane, and is requesting public comment on these requests until September 22, 2006. The Agency received these requests for voluntary cancellation of 12 lindane products in July 2006 from registrants Chemtura USA Corporation, followed by AGSCO Inc., Drexel Chemical Company, and JLM International, Inc. EPA intends to grant these requests pending outcome of the public comment period. This action will cancel the

remaining lindane pesticide products registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for use in the United States.

Lindane is a broad spectrum, organochlorine insecticide used to treat the seeds of barley, corn, oats, rye, sorghum, and wheat. EPA announced in early August 2006 that it has determined that the risks of continued lindane registration outweigh the benefits, and therefore the remaining uses of lindane are not eligible for re registration. EPA expects the cancellation of these uses to result in no significant loss to U.S. agriculture due to the successful development and registration of safer alternative pesticides in recent years. Once the cancellation process is complete, EPA will propose to revoke the existing tolerances (or allowable residues of lindane) in animal fat.

Lindane is recognized internationally as a toxic, persistent, and bio-accumulative pesticide. The six seed treatment use cancellations are the last of many lindane voluntary cancellations that have taken place since the Food Quality Protection Act of 1996 (FQPA) was enacted.

EPA's August 23, 2006 Federal Register¹ notice announcing the lindane voluntary cancellation requests is available on the Web site. Information about lindane is available at regulations.gov in docket number EPA-HQ-OPP-2002-0202, and on the Agency's Lindane Web page.

EPA Seeks Public Comment on Proposed Stipulated Injunction Regarding Threatened Species – September 1, 2006

September 1 - EPA has published in the *Federal Register* a proposed Stipulated Injunction that would resolve a lawsuit brought against EPA by the Center for Biological Diversity (CBD). The Stipulated Injunction establishes a series of deadlines for the Agency to make "effects determinations" for 66 named pesticides to determine their potential effect on the California red-legged frog (a threatened species native to California). The Stipulated Injunction also (with some exceptions) enjoins, vacates, and sets aside EPA's authorization of uses of the 66 pesticides in certain parts of 33 counties in California. The injunctive relief, vacatur, and setting aside of EPA's authorizations would terminate for a particular use of a pesticide once the Agency reaches a "no effect" or "not likely to adversely affect" determination for which consultation is not necessary, receives the U.S. Fish and Wildlife Service's concurrence on a "not likely to adversely affect" determination for which consultation is necessary, or completes consultation with the Service on any determinations that the action "may affect and is likely to adversely affect" the species.

The Stipulated Injunction would also require EPA to develop and distribute a bilingual (English and Spanish) brochure regarding certain aspects of the Stipulated Injunction, information about the California red-legged frog and frogs in general, and pesticides. EPA will be required to distribute this brochure to all commercial certified applicators within California, all private certified applicators residing in counties where use authorizations have been set aside, registrants of the 66 pesticides, the California Departments of Pesticide Regulation and Fish and Game, and the Pacific Region of U.S. Fish and Wildlife Service. In addition, EPA is to distribute 250 copies of the brochure to each County Agricultural Commissioner and each Cooperative Extension Agent office in the affected counties.

EPA is seeking public comment to determine if any changes are necessary to the proposed Stipulated Injunction. The full text of the proposed Stipulated Injunction, a Fact Sheet, and instructions for submitting comments are available at the Endangered Species Protection Program Web site.

EPA Methyl Bromide Inventory Data Shows Downward Trend – September 7, 2006

Today EPA released data showing a steady decline in the aggregate methyl bromide inventory held by companies in the United States since 2003, when the Agency began collecting such information.

Methyl bromide is a widely used soil fumigant that is also a powerful ozone-depleting substance. Under the Montreal Protocol on Substances that Deplete the Ozone Layer and the Clean Air Act, the United States phased out new production and import of methyl bromide, except for allowable exemptions for users who have no technically and economically feasible alternatives. Methyl bromide needs for these critical uses are met through allowable production under the Montreal Protocol's exemption process as well as the use of existing inventory held by companies in the United States.

The data includes, in aggregate form, the inventory held by approximately 35 companies in the United States from 2003 to 2005. The methyl bromide inventory data shows a continued decrease – approximately 16,422 metric tons in 2003, 12,994 metric tons in 2004, and 9,974 metric tons in 2005 - and demonstrates that the United States is managing its domestic inventory appropriately.

The phase-out of new production and import and the orderly reduction in the existing inventory that facilitates transition to alternatives are proceeding in a manner consistent with previous successful phase outs of ozone-

depleting substances, such as chlorofluorocarbons (CFCs) and halons. The United States continues to protect the ozone layer and meet its obligations under the Montreal Protocol while meeting the needs of American farmers.

Since 1994, the U.S. Government has invested over \$150 million in research and innovative technologies to promote alternatives to methyl bromide. In addition, U.S. farmers have adopted innovative technologies to reduce methyl bromide use and emissions, such as reduced methyl bromide concentrations in mixtures, and the use of tarps to retain methyl bromide in the soil for longer periods of time.

While not as highly damaging to the ozone layer as other chemicals that have already been phased out (like chlorofluorocarbons, or CFCs), scientists have reaffirmed methyl bromide status as a powerful ozone-depleting chemical. The World Meteorological Organization and the United Nations Environment Programme 2006 Scientific Assessment recently affirmed that bromine continues to play a major role in stratospheric ozone depletion. The ongoing transition to methyl bromide alternatives continues to be an important priority for EPA.

EPA's release of the aggregate inventory numbers was made possible by the conclusion of two lawsuits that had been brought to prevent the release of the aggregate data.