

## Using and Disposing Pesticides Safely



If nontoxic controls won't do the job, you may have no choice but to use a pesticide. "Pesticide" is a general term for any product that destroys or repels pests, or that prevents or mitigates their attack. The group includes insecticides, used against insects and related creatures of various types; fungicides, which control many plant diseases; and herbicides, which kill weeds.

The U.S. Environmental Protection Agency (E.P.A.) has strict rules for pesticide classification and labeling. Because all pesticides can be dangerous if used incorrectly, the regulations apply both to products we think of as quite benign (such as soap sprays) and to those so toxic they can be applied only in tightly controlled situations by persons certified to use them.

When you buy any pesticide you need to read the label carefully. Check the product's common name (the name listed on the label under "active ingredients"), which often differs from the trade name; the insecticide carbaryl is marketed under the trade name Sevin, for example. In this book, we refer to pesticides by common name. Also look for the signal word on the label; it will give you an idea of a product's immediate toxicity. The four signal words are "caution," "warning," "danger," and "poison"; "caution" indicates the lowest toxicity, "poison" the highest.

As a general rule, start your control attempts with the less toxic products. Soaps, oils, sulfur, pyrethrin, and Bt all fall into this class of "milder" pesticides; when used carefully, according to label directions, they pose minimal danger to you and the environment.

You must use pesticides with care: some individuals may be allergic to them, and they can cause eye or skin irritation. Soaps and oils are extremely dangerous to fish.

### Reading a Pesticide Label

When you read a pesticide label, start by looking at the list of active ingredients. Here you'll find the common name of each ingredient—information that's useful when you're comparing brands or following recommendations that refer to products by the common rather than trade name.

Also look for the signal word—"caution," "warning," "danger," or "poison." This word alerts you to the product's immediate toxicity; "caution" indicates the lowest toxicity, "poison" the highest. As a general rule, it's a smart idea to start your control attempts with the least toxic choice possible.

Labels specify which pests the product controls; give a list of plants on which it can be used, also noting whether it is safe for food crops; provide storage and disposal

information; state any special precautions; and give first-aid instructions in the event of unsafe exposure

Once you have purchased a pesticide, mix it exactly as the instructions direct. A solution that is too weak may be ineffective; one that's too strong may kill the plant you're treating and be harmful to you and the environment. Then apply the product precisely as directed. If the instructions tell you to wear goggles or a breathing mask, it is essential that you do so. A wide brimmed, washable hat should also be worn to keep the pesticide off of your head and neck. If the label says to avoid eye contact, wear goggles with side shields. If it says to avoid inhalation of the pesticide, wear an approved face mask. If it says to avoid inhalation of the vapor, wear an approved respirator. The label will tell you this. The typical dust mask available in drug stores will not protect against the misted sprays of pesticide applications. Inhalation allows absorption of a high percentage of the pesticide compound. Know what the risks are, then it is up to you to protect yourself from them. When they are applied properly, your body does not come in contact with pesticides.

Avoid exposing skin surfaces to the chemical. Wear gloves approved for pesticide application, eye protection and coveralls. The skin and eyes are the most likely channels for pesticides to enter the body. Be wary of clothing that becomes wet with a chemical because it can soak through to the skin surface. Do not spray pesticides outdoors when it's windy or you may put yourself and others at risk. Clothes contaminated with pesticides should never be washed with the hope that by washing, you can remove the chemicals. Follow the safest precautions in disposing of contaminated clothing.

Any pesticide containing organophosphate compounds should be treated with particular caution. Often contained in roach and wasp sprays, it is an excellent pesticide that affects the enzyme system connecting nerves to muscles. But these compounds can have a similar effect on humans and pets and may be deadly in very high doses.

Children may be more susceptible to the effects of pesticides because they have a larger skin surface area compared to their body weight. And because they're often outdoors, playing and rolling around in the yard, they may have greater exposure to the chemicals than adults. Pets cannot read signs, so be sure to keep them away from any area treated with wet compounds until dry.

Skin that comes into contact with pesticides should be immediately washed with soap and water. Water helps dilute the chemical and soap removes the oil that binds the active ingredients. Affected eyes should be flushed with lots of water. Ridding the body of the pesticide as soon as possible helps minimize any effects. Wash clothes with detergent.

If skin irritation continues, you should contact a physician. Severe exposure to compounds such as organophosphates requires medication to combat effects like twitching muscles and a racing heart rate. On the other hand, the worst reaction to another pesticide, pyrethroids, is a temporary skin sensation. Pyrethroid-like compounds occur naturally in the mum flower. Pyrethroid insecticides are readily available at hardware stores. In any case, always remember to use caution when using, storing and disposing of pesticides.

## Storage of pesticides



Store pesticides safely Store pesticides out of reach of children and pets, in a locked place if possible. Store pesticides away from food, medicine, and feed products. Store pesticides in their original container. Do not put pesticides in pop bottles, glasses or plastic jugs

Dispose of pesticides and containers safely. Don't put unused pesticides directly in the garbage or pour them down the drain. Contact your county health department to find out what to do with them.

**Liquid pesticides:** When you use all of the pesticide in a container, fill the bottle one-third full with water, replace the cap tightly, and shake vigorously. Pour the water into your sprayer, allowing the container to drain for 30 seconds. Repeat at least three times, or until the container is clean. Keep empty containers until your community has a pesticide recycling day, or dispose of them in an approved landfill.

**Pesticide powders and granules:** Follow label directions for disposal of containers. Don't use empty pesticide containers for other purposes. Don't burn pesticide containers in the fireplace, woodstove, or burn barrel. Don't put them in trash compactors