

## Using Pesticides Safely and Wisely

### What Is a Pesticide?

A pesticide is any chemical that is used to kill any organism – plant, animal, or disease. Pesticides include herbicides that kill plants, insecticides that kill insects, fungicides that kill fungi. If table salt is used to kill slugs, it is being used as a pesticide.

### A Brief History of Pesticides

Pesticide use began with the dawn of agriculture, and the first recorded use of a pesticide refers to sulfur, which was used as an insecticide in Sumeria in 2500 BCE. Until the 20<sup>th</sup> century, natural methods were used to control pests. These included mercury and arsenic compounds to control body lice, honey and arsenic to kill ants, and salt to control weeds. Obviously, care needed to be taken with some of these. However, it wasn't until DDT began to be used as an insecticide in 1942 that pesticides became highly toxic.

Their unwise application caused harm to the health of humans and other animals and ultimately to our environment. In 1971, the Environmental Protection Agency was created by an act of Congress, and it banned DDT use in 1972. This was definitely a step in the right direction.

Hormone-disrupting, carcinogenic, and otherwise harmful pesticides are everywhere – in the air, our soil, our food, our water, and our bodies. DDT has been found in humans

everywhere in the world. Pesticides banned decades ago are still with us.

We can't undo the harm that has been done by the careless use of pesticides, but there are many ways to keep from adding to it.

### What Can You Do?

Minimize or even eliminate the use of pesticides by using Integrated Pest Management (IPM). IPM looks at the big picture and takes into consideration that what we do now will have effects far into the future. **See Fact Sheet #94 Integrated Pest Management.**

### Be Wise and Safe –Read the Label

The label is a legal document. Any use not specified on the label is a violation of federal and state law.

If you decide to use a pesticide, be certain that it is formulated for the pest you want to control as well as for the plant on which you'll be using it. An insecticide will have no effect on fungi, and fungicides won't kill insects. Using a pesticide on the wrong plant can severely damage the plant; using it on the wrong pest is dangerous to the ecological balance. Read the label on the product you plan to use. It will tell you what pests it is for and what plants it may be used on. It will also provide the proper method of application and the correct amount to use.

Familiarize yourself with the life cycle of the pest. To be effective, a pesticide must be applied when the pest is in its vulnerable life stage. Doing otherwise will be ineffective and will contaminate the environment unnecessarily. The label will tell you when to apply the pesticide.

Some pesticides, especially fungicides, are preventive only. Their application will not heal damage already done, but if the spray is timed properly, it may prevent new infections.

Read the label for information on animals that are harmed when exposed to the pesticide. Many pesticides are harmful to beneficial insects, insects that feed on pests and keep their population numbers down. Pesticides can be harmful to birds. You may be advised to keep pets away from the area where a pesticide has been applied for a specified period of time. Many pesticides are harmful to amphibians and fish. Those that are over-applied (more is not better!) will leach into groundwater and into streams, lakes, wetlands, and ultimately Puget Sound.

Don't dispose of unused chemicals in sewers or dump them down the drain. This water is not treated to filter out pesticides, and they will eventually make their way into Puget Sound. Take old, unused, and unwanted pesticides to a hazardous household waste pick-up point.

The label will also provide information on the harm these compounds can do to *you*. It will list what protective clothing you should wear when

handling the pesticide, and what medical treatment to seek if you are exposed.

You are responsible for any damage your spray causes to neighboring property due to wind drift or water runoff. Don't spray on windy days or allow an insecticide to drift onto blooming plants or weeds where bees might come into contact with it. Bees can carry toxins back to the hive and kill off the entire population. Don't allow spray to drift onto food crops unless the chemical is labeled for use on those crops.

Don't assume that organic pesticides are less toxic than man-made ones. Many are not. Organic pesticides must be registered with the EPA just like man-made ones.

#### Checklist

- Do you know what insect/disease you are spraying for?
- Are the host plant (or situation) **and** the pest/disease listed on the label?
- Is the pest present and in a stage that will be controlled by the pesticide at the time you are planning to spray?
- Is this pesticide the most environmentally friendly choice for solving the problem?
- Is the level of damage great enough to warrant spraying, or will the problem resolve itself naturally if given time?

For answers to questions about the toxicity of a pesticide, contact The National Pesticide Information Center – 1-800-858-7378 – 6:30 a.m. until 4:30 p.m. PT, seven days a week.

8/11

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