



GARDEN INFORMATION SERIES



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PESTICIDES

HOW TO HANDLE, APPLY, AND STORE
THEM SAFELY



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When an insect is eating your roses, there are brown patches in your lawn, or weeds are taking over your garden, you want to be able to fix the problem. There are a number of ways one can alleviate these problems, from hand-removal of weeds or use of beneficial insects to kill the insect pests to natural or synthetic chemical sprays or granules. This brochure is designed to provide basic information about use of pesticide sprays or granules.

WHAT IS A PESTICIDE?

A pesticide is any material (natural, organic, chemical, synthetic) used to kill pests. It is a blanket term that includes insecticides (insect killers), herbicides (plant killers), fungicides (disease killers) and rodenticides (rodent killers). When used properly, pesticides can be helpful in protecting your plants from damage with little risk of injury to the environment or health of people and pets. However, when the directions are not followed, plant injury may occur, pests may not be controlled, pesticides may contribute to ground or water pollution, and people and pets may be harmed.

SHOULD I USE A PESTICIDE?

The first steps in deciding whether to use a pesticide or not is to determine what are the alternative methods of controlling the pest. In general, pesticides should be used only when there is sufficient damage to warrant their use and when other control methods are inadequate.

Questions you might ask yourself are:

- Is there enough damage to warrant controlling the pest? If you notice a few holes in a leaf, that might not be a problem. However, seeing holes in many leaves would probably mean you would want to control the pest.
- Are there conditions that have caused the pest to become a problem? Can you change those conditions? Will the conditions change due to the weather? For example, over-fertilizing will cause a plant to have tender growth that is attractive to some insects. Some diseases are only a problem when it is cool and damp. If the forecast is for dry, sunny weather, the problem may take care of itself.
- What are my other choices? There are many ways to control pests other than pesticides. These include cultural control (using the right pruning, fertilizing, watering regime), mechanical control (hoeing weeds, spraying leaves forcefully with water for insect control), and biological control

(usually beneficial insects that eat other insects or injure them in some way). If you decide to use a pesticide you will need to answer the following questions:

HOW DO I KNOW WHICH PESTICIDE TO USE?

After you have determined what the pest is, either by your own experience, help from the garden center, or another method, your next step is to choose the correct pesticide. The most important information is found on the product's **label**. The label is a legal document and every pesticide registered in the United States will have the following information:

- Pests controlled
- How much to use
- How to apply
- When to apply
- Signal word
- Safety precautions

Read the label carefully to be sure that the pesticide you are buying will control the pest. Also be sure that you have the proper equipment for applying the pesticide. Use safety equipment, such as rubber gloves and eye protection. Use a dust mask or respirator when using dusts or granules. If you are spraying for weed control, keep a sprayer **ONLY** for that purpose. Otherwise herbicide residue in the sprayer may injure plants if the same sprayer is used for applying another pesticide.

WHAT IS THE SIGNAL WORD?

Signal words are used to indicate the relative hazard of the chemical. Look for the words "Danger", "Warning," or "Caution" on the label. "Danger" is the most hazardous, "Warning" is moderately hazardous, and "Caution" has the least toxicity. It is usually best to choose the product with the lowest hazard rating that will still control the pest.

HOW DO I KNOW HOW MUCH TO USE?

The label will describe the amount of pesticide to use for a given area. For most pesticides the area given is usually 100 ft² or 1000 ft². Therefore, you need to know how big an area you are treating. Suppose you are trying to kill weeds in your lawn and the herbicide label says, "use 2 oz (ounces) for 1000 ft²". However, after measuring, you find your lawn is only 600 ft². Therefore, you would use (600 ft²/1000 ft²) X 2 oz = 0.6 X 2 oz = 1.2 oz of herbicide. **NEVER** use more than what the label recommends; the pest will not be controlled any faster, you are wasting the pesticide, and potentially it can cause plant injury. Try to mix only as much as you need immediately. Also, keep a set of measuring spoons or cups for use **ONLY** for pesticides. Write

"PESTICIDE ONLY" on them or distinguish them in some way from your kitchen utensils. **Once a spoon, measuring tool, or mixing container is used for pesticides, NEVER use it for anything else.** If you are using something that is not your regular pesticide measuring or mixing tool, dispose of it after thoroughly rinsing (see below) so that it will not be used for food. **NEVER** mix pesticides with your hand.

HOW DO I APPLY PESTICIDES SAFELY?

Apply pesticides when there is little or no wind. Do **NOT** apply near people and pets. Follow label directions about when the pesticide-treated area can be re-entered and/or fruits and vegetables can be harvested.

WHAT SHOULD I DO IF I HAVE LEFTOVER PESTICIDE?

If you have mixed too much pesticide, place it in another container and clearly mark it "pesticide." Also, write the name of the pesticide on the container, for example, Sevin. Do not use an old soda bottle or anything that could be mistaken for a drink container. Many people have been poisoned by inadvertently drinking from these containers. Do not dump the material down the drain, onto the soil, or into sewers. Pesticides can be disposed of

by taking them to the local hazardous waste disposal facility.

Empty pesticide containers should be rinsed three times before disposing in the trash. The best time to do this is when you are using up the last amount of pesticide in the container. Put a small amount of water in the sprayer and add the pesticide to the sprayer. Then, add about 1/3 the final amount of water to the pesticide container. Swirl it around the container and transfer it to the spray tank. Repeat two times. This way, you will have rinsed the container three times and used that water to make the pesticide application.

HOW DO I STORE PESTICIDES SAFELY?

Always store pesticides and mixing tools where children cannot get to them. Store pesticides in a well ventilated area, away from food and seeds. If possible, lock the pesticide storage area and put a sign on it to warn others that pesticides are stored there.

Ask your nursery or garden center professional for additional information and assistance about pesticides and their proper use.

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