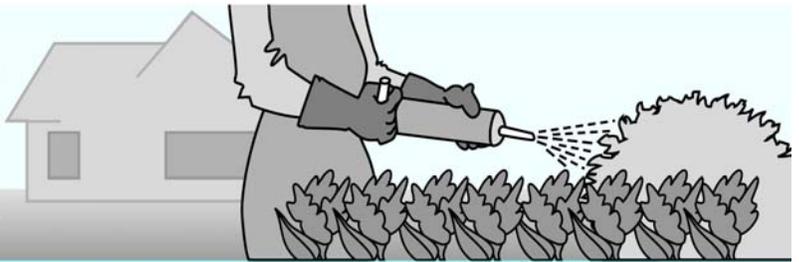


Homeowner's GUIDE



To Pesticide Use Around the Home and Garden

XCM-220

Pesticides can serve a useful purpose around the home and garden by reducing some of the problems we face from pests. But they can harm our drinking water supplies if handled improperly.

Pesticides include insect killers (insecticides), weed killers (herbicides), and fungus killers (fungicides). The ingredients that make these chemicals toxic to pests also can be harmful to people and animals, and in some cases, they can also contaminate water supplies.

This can happen even when pesticides are used according to the label. Water contamination is costly to remedy, and homeowners who use pesticides need to follow some common sense guidelines to avoid these unintended consequences.

Before You Buy a Pesticide

Pest-free homes and gardens are expensive, impractical, and environmentally unsound. The urge for a chemical “quick fix” for every problem around the home should be re-evaluated. Instead, maintaining weeds or garden insects at non-damaging levels is a more realistic goal. Allowing low levels of pests to survive will actually help maintain a population of natural enemies.

There are a number of strategies homeowners can use to manage pests without chemicals. Evaluate all your options such as non-toxic sprays, biological controls, changes in cultural practices, or even doing nothing before you purchase a chemical. In some



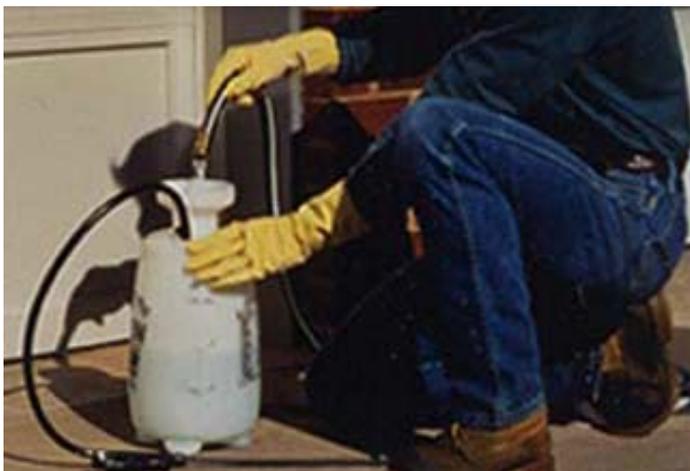
**Colorado
State**
University
Cooperative
Extension

cases, a pesticide may be the best option—if so, consider calling a licensed, professional applicator.

Before purchasing a pesticide, be sure you know the answers to the following questions:

- **What is the problem?** Correct pest identification and problem diagnosis is essential to successful control.
- **What are the control options?** Evaluate your options and the need for treatment. In some cases doing nothing may be the best choice.
- **Is chemical control the appropriate action?**
- **Which pesticide is appropriate for the problem?** No single pesticide can take care of all of your pest problems, and some can even induce other pest problems.
- **What is the target area?** This helps determine exactly how much pesticide is needed and just where it needs to be applied. Avoid sidewalks, driveways, and other hard surfaces where runoff could occur. In some cases, only a small portion of the yard or garden may need treatment. Spot spray occasional weeds rather than treating the entire lawn.
- **When should the pesticide be applied?** Pesticides should be applied at a time when they will be most effective against the pest. In many cases, pests under dormant or inactive conditions may not be susceptible to pesticide treatments.

Ask for help from a local pest control professional or Cooperative Extension office if you are unsure of the answer to any of these questions.



Buying Home and Garden Pesticides

Once you're sure that a pesticide is required, you must determine how much chemical is needed. Know the size of the area you want to treat before buying the chemical. Usually, only a small amount of pesticide is necessary. Many chemicals can be purchased in ready-to-use spray bottles, eliminating the need for mixing, large containers, and calibrated equipment. When you go to the store to buy any pesticide:

- **Read the label** at the store and look for information on health and environmental hazards associated with the product.
- Look for **selective or pest specific pesticides** rather than broad spectrum pesticides, which may end up harming non-target plants and insects.
- **Buy only enough pesticide** for the job to avoid storage or disposal issues.

Pesticide labels often include a telephone number where expert information on the product is available. If someone is poisoned, take the pesticide label to the attending physician.

Mixing Pesticides

Before you actually mix a pesticide for application, test your sprayer with water to make sure it is working properly and is not leaking. Read the label again to determine the amount of chemical you need to mix. Be sure to do any necessary calculations before you begin. Then select an area on the lawn or open ground to mix the pesticide.

- **Put on rubber gloves** and a long sleeve shirt before opening the package.
- **Do not mix pesticide on a hard surface** or concrete; a grassy area where children do not play is usually best.
- **Never mix pesticide with anything besides water**, unless specifically directed to do so by the label.

- **Fill the sprayer with 2/3 of the amount of water needed.** Add the correct amount of pesticide. Rinse the measuring spoon into the sprayer and finish filling the sprayer as directed.
- **Measure the proper amount** of product as specified on the label. More is NOT better!
- **Mix only the amount needed** for the current job and spray it all out on the problem area to avoid disposal problems.

rather than rinsing into a storm sewer or other drain. Don't forget to flush out the hoses and nozzles.

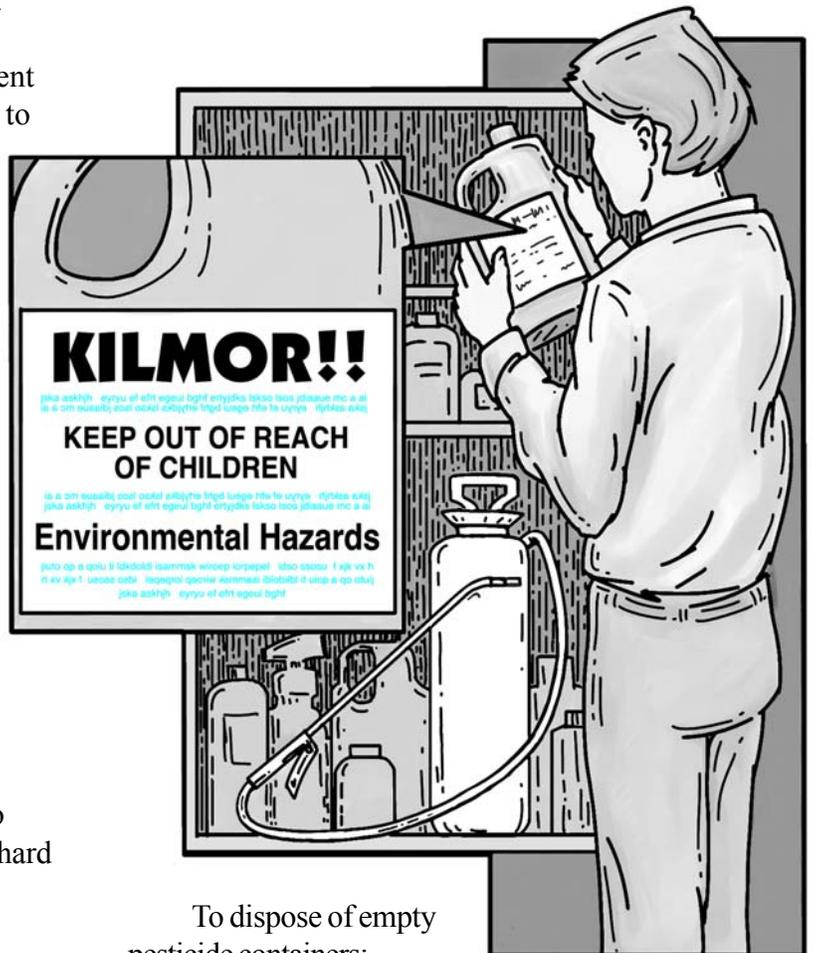
And before you eat, drink or smoke, wash with soap and water. The clothes worn during spraying should be laundered separately from other clothing.

Applying Pesticides

Before spraying, clear all people, pets, toys, pet dishes, and other items out of the area to be treated. Keep everyone away until the spray has dried or for as long as the label directs.

It's best to spray in the early morning or late evenings to help protect honey bees and other pollinators. If the wind comes up while you are spraying, stop and finish the job later so that other areas are not affected by pesticide drift.

- Always read and follow label instructions, it's the law.
- Apply pesticide only on the target areas. Do not apply on driveways, sidewalks or other hard surfaces where water runoff occurs.
- Clean up any spilled chemical right away. Cat litter and "floor dry" work well to clean up spilled liquid concentrate.
- If the label states that the product must be watered in, apply only enough water to completely wet the treated area. Stop watering before it puddles or begins to run off.



To dispose of empty pesticide containers:

1. Fill the empty container half full with water and shake to rinse.
2. Empty the rinse water into the sprayer. Repeat and rinse two more times.
3. Use the rinse water to make up your last batch of spray. Do not pour it down the drain or storm sewer.
4. Puncture the bottom of the container if it is plastic or metal, then wrap it in newspaper and throw it in the trash. Do not burn or recycle pesticide containers.

Nationwide, about 11 percent of pollution problems in our rivers come from storm sewers and urban runoff.

Cleaning Up and Disposing of Waste

If you have any pesticide mix left over after the job, spray it out on an appropriate area of your lawn or garden. Rinse off all equipment and gloves on the grass,

Storing and Disposing of Pesticides

One of the most compelling reasons not to apply lawn and garden chemicals yourself is the problem of storing or disposing of unwanted pesticide. Improper disposal of pesticides causes some of the most serious water quality and environmental concerns.

Sloppy storage practices are also dangerous. Children or pets that get into stored pesticides can be seriously harmed.

To store pesticide properly:

- Keep pesticide in a locked, labeled, weather-proof cabinet away from the living area. Keep gloves and measuring utensils locked up also to prevent their use for other purposes.
- Keep all chemicals tightly sealed in their original containers.
- Do not allow powder or granular products to get wet or liquid products to freeze. This may ruin the products and lead to disposal problems.

The best way to get rid of a pesticide is to use it as intended. If you have extra, try giving it to a neighbor or friend. Legally disposing of concentrated pesticides can be difficult. Watch your paper for information on hazardous waste collection programs or call your local Cooperative Extension office, city or county health department, or wastewater treatment plant for details on pesticide recovery/disposal programs.

In spite of the difficulty of getting rid of these products, never resort to dumping them down the drain, in the garbage or down the storm sewer.

As little as one teaspoon of certain pesticides rinsed down a drain is enough to show up as a pollutant in local streams.

Important phone numbers:

Colorado Department of Agriculture

Pesticide Section, (303) 239-4147

Colorado Department of Health/Environment

Household Hazardous Waste Division,

(303) 692-3320

Colorado State University Cooperative Extension

(970) 491-6027

EPA Region VIII Pesticide Office

(303) 312-6286

Rocky Mountain Poison Control Center

(800) 332-3073

The National Pesticide Information Center

(800) 858-7378

<http://npic.orst.edu>

Table 1: Pesticide Signal Words

Most dangerous	Signal Word	Meaning
	Danger-Poison	Extremely flammable, corrosive, or highly toxic
	Warning	Moderate hazard
	Caution	Low/moderate hazard
	No signal word	Not hazardous
	Safest	

**WARNING
PESTICIDES APPLIED**



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Simple Things You Can Do To Protect Water Quality

- Question the need for pesticide. There may be a better choice.
- Accept a certain amount of pests or weeds as part of the natural balance.
- Consider using a licensed, professional applicator instead of applying chemicals yourself.
- Follow all label directions for storing and mixing of pesticides and for disposing of empty containers.
- Use only the amount of chemical specified by the label—more is **NOT** better!
- Mix only the amount of pesticide that will be used for the current job.
- Take the time and care not to get any pesticide on sidewalks, driveways or other hard surfaces.
- Store pesticides in their original containers with labels intact, visible and legible.
- Never pour leftover spray mix or pesticide down the drain or storm sewer.

