



Safe Use of Pesticides in the Home and Garden

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Homeowners and home gardeners frequently face the problem of controlling insects, weeds, plant diseases and other pests that contaminate food, destroy property, injure garden produce or cause personal annoyance. At times, some of these pests cannot be controlled without using pesticides.

Proper use of pesticides has proved beneficial to our society. World food production and control of infectious diseases are dependent on pesticides. However, it is necessary to recognize the dangers of pesticides to humans, pets and the environment.

What Are Pesticides?

Pesticides are chemicals of plant, animal or synthetic origin manufactured to kill or repel pests—insects, weeds, plant disease organisms, rodents and other kinds of animal and plant life—that threaten man's health, food or comfort. Disinfectants are also considered pesticides. Pesticides are divided into several groups based on the organisms they are designed to control. These groups are:

Insecticides - Chemicals used to protect man, animals and plants from insect annoyances, damage and destruction.

Fungicides - Chemicals used to protect man, animals and plants from fungal organisms that cause diseases.

Herbicides - Chemicals used to control unwanted vegetation, either selectively or generally.

Rodenticides - Chemicals used to control rats, mice and other rodent pests.

Miticides or Acaracides - Chemicals used to control mites and ticks.

Dangers of Pesticides

All pesticides are designed to repel or kill pests. All pesticides are poisons, including organic and natural formulations. If not handled and applied properly, many pesticides used in the home or garden can injure people and animals. Most pesticide poisoning, whether to adults, children or pets, is caused by careless use, improper storage or ignorance by the user.

Minute amounts of pesticide remaining on fruits and vegetables are called residue. The Environmental Protection

Oklahoma Cooperative Extension Fact Sheets
are also available on our website at:
<http://osufacts.okstate.edu>

POISON



HELP
1-800-222-1222

Agency allows a certain amount of residue on fruits and vegetables that does not pose a risk to humans. When excessive amounts of pesticide are used, these residue levels may be harmful. Therefore, it is very important for homeowners to follow pesticide label directions to avoid potential harmful amounts of residue.

Environmental contamination is a threat from misuse of pesticides. Improper use or careless disposal of pesticides can result in soil and water contamination. Most pesticides today decompose or break down rapidly. There is relatively little accumulation from today's pesticides, compared with pesticides used in the 1970s.

When properly used, pesticides should give satisfactory pest control in the home and garden without endangering anyone or the environment. To minimize the dangers of pesticides, use appropriate pesticides only when necessary and with the utmost caution and respect.

Selection of Pesticides

There are now hundreds of different pesticide products to choose from when attempting to control insects, mites, rodents, weeds, nematodes and plant diseases. Many of these different types of pesticides are available in various forms, such as liquid concentrates, dusts, wettable powders, granules and baits. Each one is designed for a specific need and use.

Pesticides range in hazard from those relatively nontoxic to highly toxic. (See Extension Fact Sheet EPP-7457, "Toxicity of Pesticides"). To quickly determine a pesticide's level of toxicity, look at the product label for signal words. The signal word is set by law. The table below gives examples of signal words:

Signal word	Toxicity	Approximate amount needed to kill the average person
DANGER	Highly toxic	A taste to a teaspoon
WARNING	Moderately toxic	A teaspoon to a tablespoon
CAUTION	Low toxicity or comparatively free from danger	An ounce to more than a pint

All pesticides are required to bear the statement KEEP OUT OF REACH OF CHILDREN. This means to store the pesticide where children cannot get to it, and to keep the product away from children while in use.

Select safer pesticides for use in or around the home and garden. Try to select products with the signal word CAUTION on the label. Products with the signal word DANGER should be applied only by professional or commercial applicators. Homeowners should never use a pesticide with the signal word "Danger" or "Danger Poison."

Who's Responsible for Safe Use?

In every case of human death from pesticides, the cause has been accidental misuse. Children lead the list of victims of pesticide poisoning because people fail to take the most elementary precautions with pesticides around the home. Whenever a small child is poisoned accidentally, an older person has done something wrong. The pesticide user is responsible for seeing that family, pets and wildlife are not exposed. WE ARE RESPONSIBLE FOR SAFE USE. To avoid accidents and misuse, follow these simple rules:

Pest Identification

Identify your pest problem before attempting to manage it. Observe the pest. It may not be causing any damage; it could even be beneficial. If you cannot identify it, find someone who can. The local Extension office can assist in identification of the pest and selection of management measures. Once the pest has been identified, selection can be made of a pesticide product for its management, if needed.

Label

- Read the label. This is the first rule of safety in using any pesticide. Read the label of the pesticide product and follow the directions and precautions printed on it every time it is in use. Make sure the intended crop, animal or place of use is listed on the label.
- READ THE LABEL BEFORE spraying or dusting vegetables or fruits to determine how long to wait before harvest. This is termed the pre-harvest interval.

- Observe the cautions, especially those that read "Keep out of reach of children," and those for environmental protection.

Use

- Pesticides are only one option in pest control strategies. When using a pesticide, make sure it is the best management option.
- It is best to rotate pesticides with different active ingredients and modes of action to avoid developing populations of pesticide resistant weeds and insects.
- When using a pesticide, be sure to select the best pesticide for best management and use at the proper time and conditions.
- Use the exact amount specified by the label. Too much is illegal, wasteful, environmental hazardous and financially irresponsible. Overuse can stain surfaces and fabrics or injure humans, plants or pets. Overdosage does not generally lead to better control, and too little may not work, causing repeat applications. Too little pesticide also can cause resistant insect populations to develop through time. Applying less than the label rate is a violation of the Oklahoma laws and regulations.
- Do not make more than the recommended number of applications within the time period stated on the label. If this is not followed, the extra applications could lead to increased residues on food, in soil and water and could prove toxic to humans and wildlife.
- Mix or prepare dusts or sprays outdoors or in a well-ventilated area. When opening a pesticide container, face away from, and to one side of, the cap or lid.
- Do not mix different pesticides unless allowed by label direction. Use special containers for mixing pesticides. Never use food or beverage containers.
- Keep children and pets away when mixing or applying pesticides.
- Remove aquariums, birds, cats, dogs and other pets, as well as their food and water bowls before spraying and dusting. Do not contaminate water gardens or streams.
- All insecticide and many pesticide labels do not allow applications when bees are present or plants are in bloom. Follow pesticide label directions and take care not to spray or kill bees. The same care should be taken to protect beneficial insects and fungi.
- When applying pesticides (including foggers) in the home, cover food and utensils. Check the pesticide label for protection of pets including birds, fish, amphibians and reptiles.
- Keep pets and people out of treated gardens, lawns and rooms until sprays have dried or dusts have settled—longer if the product label tells you to. If treating pets or their quarters, use pesticides labeled for that purpose.
- Never leave pesticides where children and irresponsible people can reach them. Place them out of reach as soon as the sprays and dusts have been prepared.
- Always keep pesticides in their original containers. Make sure they are tightly closed and plainly labeled. Never put a pesticide in an empty food or drink container of any kind. This has been a major cause of deaths from pesticides.
- Do not apply dust or spray on a windy day. When there is a breeze, apply the dust or spray from the windward side of the area being treated, so the breeze will blow the pesticide away from the person applying it.

- Always make sure there is a gap between the water source and tank water level (air gap) when filling any type of sprayer to avoid back siphoning pesticide into a water supply.
- Do not allow pesticides to drift onto adjoining property.
- Do not apply pesticides near wells, cisterns or any other water sources (such as storm drains or streets) into which they may run or be washed by rain. Do not clean application equipment, empty unwanted pesticide, or dispose of empty containers near these areas. Never pour pesticides or rinse sprayers down bathtub or sink drains. Disconnect hose-in sprayers immediately after turning off the water to prevent possible water contamination.

Cleanliness

- Wear protective clothing as specified in the label directions when mixing or applying pesticides to guard against splashes, spills and skin contact. The minimum of protective clothing should be shoes, socks, trousers and long-sleeve shirt. Use unlined rubber gloves when mixing or handling concentrates. Rinse them well with water before removing.
- Never smoke, eat or drink while handling a pesticide. After finishing the work, wash exposed skin surfaces with soap and water.
- If pesticide spray mix is spilled on clothing, remove it immediately and wash the exposed skin with soap and water. Launder the clothing separately from the family laundry before wearing it again. If pesticide from the container is spilled on clothing, immediately remove clothing and bathe with soap. Dispose of the clothing.
- Avoid inhaling sprays, dusts or vapors. If it does get inhaled, move away from the application area and get fresh air.
- If pesticide gets into eyes, follow emergency directions on the label, flush the eyes with water for 10 minutes to 15 minutes and get medical attention.
- If some pesticide is accidentally swallowed or the applicator becomes ill during or shortly after pesticide use, call a physician or get to the hospital immediately and take the pesticide label.

Storage

- Store pesticides and pesticide equipment in a locked cabinet or room. A cool, dry, well-ventilated area is best.
- Never store pesticides with or near food, animal feed, medicines or cleaning supplies.
- Store pesticides in their original containers.

Disposal

- To minimize disposal problems, purchase only what is needed or less for one season. Some pesticides lose their effectiveness from one season to the next. Some labels will advise this.

- Do not dispose of empty containers or surplus pesticides where they may be a hazard to fish or wildlife or contaminate water.
- Do not save or reuse empty pesticide containers. Triple-rinse empty pesticide containers immediately after they are emptied and puncture the container (except aerosol containers) so it cannot be reused. Pour the rinse water into the sprayer for use on the target site. Place the empty, punctured containers in the sanitary trash collection. If the community has a hazardous waste collection program, dispose of unwanted pesticides and empty containers at these scheduled events. If the community does not have such a program, dispose of unwanted containers in the sanitary waste collection.
- Do not pour pesticides or spray mixtures down any drain, toilet, sink or storm drains.

Pressurized Cans

- Do not puncture or burn empty pressurized (aerosol) containers. They may explode.
- Do not leave them on a stove, in direct sunlight or in the trunk or glove compartment of a car. Do not use near open flames.
- Do not spray near the face. Do not inhale fine sprays.
- To dispose of pressurized cans, exhaust all gas through the release valve and place in a trash can.

Sensitivity or Accidental Poisoning

Some people may be allergic or have a special sensitivity to pesticides. If allergic to a particular pesticide or formulation, select another suitable product for the purpose. Pesticides should be used with extreme caution where people with respiratory ailments, such as emphysema reside. If pregnant or suspect so, try to minimize exposure to pesticides.

If experiencing headache, nausea or blurred vision following use of or exposure to a pesticide, or if accidentally swallowing any pesticide, call a physician or Poison Control at 1-800-222-1222 immediately. Read the label to them, naming the active ingredient. If it is necessary to go to the physician's office or the hospital, take the pesticide container so the physician can properly identify the pesticide.

It is your responsibility to use pesticides safely. Remember you are in control of protecting your family, pets the environment and yourself from pesticide exposure. Pesticides are safe and beneficial when used according to label directions. The label is the law.

Oklahoma Poison Control Center

The Oklahoma Department of Health of Oklahoma City maintains a 24-hour Poison Control Center for diagnosis and treatment of human illness resulting from toxic substances. Make sure your physician knows the telephone number of the Oklahoma Poison Information Center.

Oklahoma Poison Information Center

1-800-222-1222 or

www.oklahomapoison.org

READ BEFORE WASHING

CLOTHING WORN WHILE APPLYING PESTICIDES

- All clothing worn while handling or applying pesticides is contaminated!!
 - Handle ALL contaminated clothing with gloves
 - Wash clothing daily
 - Wash separately from family wash
 - Prerinse or presoak
 - Use HOT water
 - Use heavy-duty liquid detergent
 - Wash only a few items at a time
 - Use highest water level
 - Use longest wash time
 - Line dry

After washing — run machine through a complete cycle with detergent

POISON CONTROL CENTER
1-800-222-1222

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