

First Aid

Always read the first aid information on the label before applying the pesticide, in order to know what to do in case of accidental contact with the skin or eyes. When seeking medical help, always bring the pesticide label.

■ **Skin exposure:** Drench the skin and clothing with water, then remove all contaminated clothing and wash skin thoroughly with soap and water. Wash hair and fingernails thoroughly, also.

■ **Eye contact:** Rinse eyes immediately with a stream of clean water and continue rinsing for 15 minutes. Victim should blink as much as possible.

■ **Inhalation:** Get to fresh air immediately. Begin artificial respiration if the victim isn't breathing. Seek medical help.

■ **Ingestion:** Check the product label to see if inducing vomiting is recommended. Sometimes vomiting is

For more information about safe pesticide use, contact your county extension office.

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Pesticide Safety:

A Guide for Gardeners and Homeowners

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Pesticides include natural and man-made substances such as insecticides, herbicides, fungicides, disinfectants and rodenticides. They are used to help control, destroy or repel destructive pests such as insects, weeds, plant disease organisms, germs and rodents.

Pesticides can increase the quality and quantity of our food supply, prevent disease and improve the comfort and aesthetics of our environment. The use of pesticides is not without risks. It is the responsibility of every pesticide applicator to prevent harm from occurring to humans, pets, livestock, wildlife or the environment.

Is a Pesticide Necessary?

■ Identify the problem and the pest. Is controlling it necessary? Will it cause unacceptable damage? Consider all control options including alternatives to pesticides such as hoeing, hand weeding, excluding the pest with barriers, sanitizing the area, and/or removing food, water or cover for the pest.

Choose the Right Pesticide

- Choose the lowest toxicity pesticide that can be used legally on the target area, crop or plant and that will safely and effectively control the pest.
- Plan ahead and buy no more pesticide than you need.
- Keep pesticides separate from other items in a shopping cart, and make sure they are wrapped in a separate bag at the checkout stand.
- Transport pesticides in the trunk of the car instead of the backseat to avoid contaminating the car interior in case of breakage.
- Make sure you have the proper safety and application equipment available and know how to use it.

Read and Follow the Label Directions

- As a pesticide applicator it is your legal responsibility to read, understand and follow the label directions. Pesticide labels will usually contain the following sections:
 - **Product name:** Indicates type of pesticide or what types of pests it will control.
 - **Ingredient statement:** Lists the amount of each active ingredient and the total amount of inert ingredients.
 - **Signal word:** Indicates the toxicity of the product.
 - Products labeled "DANGER POISON" and accompanied by a skull and crossbones symbol are highly toxic. Products labeled "DANGER" without the word "POISON" or the skull and crossbones symbol can cause severe skin injury or irreversible eye damage.
 - Products labeled "WARNING" are moderately toxic or may cause moderate eye or skin irritation.
 - Products labeled "CAUTION" are slightly toxic or may cause slight eye or skin irritation.

(continued on next page)

Special Precautions when Using Pesticides

- Examine the area to be treated and the surrounding area. Are there plants or animals that could be harmed by the pesticide? Don't spray if you cannot guarantee they will not be injured. You are responsible for any damage that could occur.
- Wear all protective clothing and equipment listed on the label, such as long-sleeved shirts, coveralls, chemical-resistant gloves, goggles, etc.
- Use pesticides only on plants designated on the label.
- Calibrate the sprayer or applicator to apply the correct amount. It is illegal and unsafe to apply more pesticide than the label states.
- Use all chemicals in well-ventilated areas to avoid inhaling fumes. Work outdoors if possible. Use protective gloves and/or masks when recommended by label instructions.
- Be especially careful while working with the concentrated pesticide during mixing.
- Don't spray on a windy day, when the spray could drift on you or into a neighbor's yard.
- Do not eat, drink or smoke when using pesticides, because traces of the chemicals may be transferred from hand to mouth.
- Wash hands thoroughly with soap and water after handling pesticides and before eating.
- Avoid wearing soft contact lenses when dealing with pesticides. Soft contact lenses may absorb vapors from the air and hold them against your eyes.
- Always avoid unnecessary exposure to pesticides. Be especially careful to keep children, pregnant women, sensitive individuals and pets away from areas where pesticides are being or have just been applied.
- An alternative is to hire a professional pesticide applicator.

(Read and follow the label directions, continued from previous page)

■ **Precautionary statements:**

Warn about potential hazards to humans, domestic animals and the environment. They also indicate special fire, explosion or chemical hazards and methods to avoid or minimize risks.

■ **Statement of practical treatment/ first aid information:** Indicates antidote or first aid treatment to administer.

■ **KEEP OUT OF REACH OF CHILDREN:** Pesticides must always be stored and kept out of reach of children.

■ **Directions for use:** Warns that federal law requires the pesticide to be used according to label directions. Indicates location, amount, frequency, and method and timing of the application. The label also indicates when it is safe to re-enter the treated area to harvest the fruits or vegetables. **Do not exceed recommended limits.**

■ Other information on the label includes the **name and address of the manufacturer, EPA Registration and Establishment numbers, and storage and disposal information.**

Disposal of Pesticides

■ Never put potentially hazardous waste, such as pesticides, directly in the garbage.

■ Check if your community has a household hazardous waste collection program. If you have questions about disposal, look in the yellow pages of the phone directory under “Waste Disposal – Hazardous” or contact the Waste Management Division of the North Dakota Department of Health (701-328-5166).

■ Share remaining pesticides with someone who can use them as intended.

■ Don't pour remaining chemicals down the drain. Bathroom cleaners, however, can be flushed down the drain with plenty of water.

■ Evaporate solvent-containing pesticides in an area where they will not be disturbed by children or pets. Check the label for the presence of solvents such as carbon tetrachloride, chlorinated solvents, petroleum distillates, toluene or trichloroethane.

■ Triple rinse empty glass, plastic and metal pesticide containers by filling the containers 1/4 full of water, covering tightly and shaking. Apply the rinse water on the original targeted area. Wrap the container in newspaper and send to the landfill or dispose as directed on the label.

■ Do not reuse empty pesticide containers.

■ Wrap aerosol containers in several layers of paper and place in a covered trash container.

■ Use up, share or wrap the following in newspaper and save for a hazardous waste collection: pest strips, pet collars, pet shampoos and pet dusting powders.

Dealing with Spills

■ Don't leave the spill unattended. Send someone else for help.

■ Keep people, especially children, and pets upwind and away from the spill.

■ Protect yourself by wearing AT LEAST the protective clothing and equipment listed on the pesticide label.

■ If indoors, ventilate the area with fans, and open windows and doors.

■ Try to confine the area of the spill. Use a non-flammable absorbent material such as cat litter to soak up the spill.

■ Place the material in a non-corroding container such as a plastic bucket with a tight-fitting lid.

■ Seal the container and label it with product name, amount and absorbent material used. In some communities, the product will need to be safely stored until the community holds a household hazardous waste collection.

■ Rinse the area several times with water and rags. Wash the area to remove traces of the product. Don't use household equipment to clean the spills, as this equipment will need to be discarded to avoid contamination of your household.

Safety Clothing and Equipment

Check the label under “Hazards to Humans and Domestic Animals” to see what special protection is needed when applying a pesticide. Protective clothing may include a hat, goggles, mask, rubber gloves, rubber boots and/or a long-sleeved shirt and long pants. A respirator that is approved for pesticides may be needed for some pesticides that pose a risk from inhalation.

Clothing Clean-up

■ Pre-rinse contaminated clothing.

■ Keep clothing used during pesticide application separate from family laundry. Launder clothing using hot water and a heavy-duty detergent after each use.

■ Clean washing machine after use by running it without clothing through a normal wash cycle.

■ Line-dry clothing (see Extension Publication HE-382 for further information).

Application Equipment and Clean-up

■ The pesticide sprayer or granular applicator needs to be in good operating condition and properly calibrated to apply the correct amount of pesticide.

■ Clean all equipment, including mixing tools, after each use. Triple rinse with clean water and allow to dry.

■ If a sprayer was used, rinse it with a small amount of water and spray over an area that may be legally treated. Clean the sprayer with water or as directed on the label. Rinse well and spray on an area that can be legally treated.

■ For information on calibration of pesticide sprayers or granular applicators, contact your county office of the NDSU Extension Service or your pesticide supplier.

Pesticide Alternatives

■ Select plants resistant to insects and diseases.

■ Remove dead plant material that could harbor insects or diseases.

■ Pull weeds before they bloom.

■ To keep insects away without pesticides, try physical barriers such as cheese cloth, netting and row covers. Surround developing plants with tin can collars to protect against insects that feed or lay their eggs at a plant's base.

■ Try removing pests with a forceful jet of water.

■ Spray plants with insecticidal soaps to kill soft-bodied insects such as aphids and grubs.

■ Try a natural insecticide such as *Bacillus thuringiensis* (Bt), which has been shown to be effective against caterpillars and beetles without harming humans or wildlife.

■ Spread boric acid liberally in areas where insects typically enter houses to kill ants and roaches. Boric acid should not be used where children or animals may encounter it.

■ Plant a variety of crops that flower throughout the season (such as some marigolds) to deter some pests.

■ Remove sources of food, water and cover.



Storage

■ Store pesticides out of reach of children – in locked cabinets or in cabinets with childproof latches.

■ Store pesticides only in their original containers with labels visible and intact.

■ Mark the date on containers that are put into storage with a permanent marker and keep an up-to-date list of products and purchase dates near the storage area. Use oldest products first.

■ Keep metal containers dry to prevent corrosion and possible leakage.

■ Seal containers tightly after using.

■ Store all pesticides away from food, feed, seed, fertilizer or water.

Pesticides and Food

In recent years consumers have expressed concern over pesticides and their health and environmental effects. Food-borne illnesses due to bacteria, molds and yeasts pose a greater risk than exposure to pesticide residues.

Careful use of pesticides helps ensure that a variety of high-quality produce is available all year. The Environmental Protection Agency (EPA) sets the legal levels of pesticide residues that may remain on food sold to supermarkets or food processors.

The Food and Drug Administration (FDA) tests food samples for pesticide residues and inspects them to make sure that only legally registered pesticides are used. The United States Department of Agriculture (USDA) tests meat, poultry and egg products for pesticide residues. If illegal pesticides or improper amounts are detected, the food is to be removed from the marketplace.

Consumers who grow food for themselves or others also need to exercise caution. Although pesticides vary in their toxicity, all pesticides should be treated as potentially harmful. **The label directions must be followed, and the pesticide must not be applied above the recommended rate or more often than recommended.** The pesticide should not be applied closer to harvest than recommended to allow for the pesticide residue to be degraded.

Products labeled “organically grown” are choices for those who wish to consume less pesticides. Organic produce may be more costly and less available. To be truly organic, a food may not be raised using synthetic pesticides, and the soil must have been pesticide-free for three years. Organic growers, however, may use naturally-occurring pesticides such as diatomaceous earth.

Fresh produce from your garden or from the grocery store may contain traces of pesticides. The following guidelines will minimize your exposure to pesticide residues.

■ Choose foods carefully. Examine food for dirt, cuts, decay and mold.

■ Eat a variety of foods every day to minimize your exposure to any one pesticide.

■ Wash fruits and vegetables thoroughly under running water. Do not use household detergents on fruits and vegetables, because these are not recommended for use with food by the FDA.

■ Peel fruits and vegetables to remove residues from the surface. If you want to eat the fiber-rich peelings, scrub the produce well. Peel away and discard outer leaves from cabbage and lettuce.

■ To avoid pesticide residues in animal products, trim fat and skin from fish, poultry and meat, and discard pan drippings and broths.

