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Pesticide Handling And Storage Safety

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Whether you are a homeowner, farmer, rancher, or a commercial applicator, proper handling and storage of pesticides are important aspects of safe pesticide use.

Transportation

Never transport pesticides inside the passenger compartment of an automobile or the cab of a truck where they could come in contact with groceries, livestock feed, or other products which might become contaminated. Transport them in the trunk of the car or in the back of the truck, making sure they are secure to prevent spills. Should there be an accident or spill, immediately inform the local police and fire officials of the quantity and names of the pesticides involved. Large spills, particularly of "Restricted Use Pesticides," should be reported to CHEMTREC at (1-800) 424-9300, the Alabama Department of Environmental Management at (334) 271-7984, and the Alabama Department of Agriculture and Industries at (334) 242-2656.

Applicators of pesticides, particularly in heavily populated areas, must take special precautions to secure products transported to the application site. Allowing pesticides to remain unattended on the back of an open truck is inviting an accident—and costly lawsuit.

Commercial transporters of pesticides must meet special requirements, such as placards on the vehicles, bills of labels of the product, etc. Consult the Department of Agriculture at (334) 242-2656 for more information.

Storage

Nearly three-fourths of all pesticide accidents occur to non-users of the materials, many of which are children. In addition, each year there are several cases of livestock and pet poisonings from contacts with improperly stored pesticides. These accidents not only cause human suffering and economic losses, but are violations of federal regulations. **READ THE LABEL WHEN STORING PESTICIDES; IT IS THE LAW.**

Whether you are a homeowner, producer or applicator of pesticides, there are basic safe storage rules to follow:

- Keep pesticides, other poisons, and related materials locked in a cabinet, room, or separate building designated solely for the storage of these materials. Metal storage cabinets, such as discarded school lockers, provide excellent storage for homeowners or other users of small amounts of pesticides.
- Post the facilities with a sign that reads, **PESTICIDES - POISONS, KEEP OUT**, or similar warning signs.
- Never store pesticides where food, feed, seed, fertilizer, or other products can be contaminated.
- Store pesticides in their original containers. It is the law.
- The facility should be reasonably fireproof and well ventilated. Temperatures should be kept between freezing and 100 degrees F.
- A sealed concrete floor, concrete block walls, and metal shelves are recommended.
- With shelf storage, store dry pesticides on the top shelves, liquids on the lower ones.
- Provide adequate space for the secure storage of empty pesticide containers until proper disposal of them is possible.

Those businesses with large quantities of pesticides to store should have a separate building for this purpose. In addition to the above features, this building should also include the following characteristics:

- When feasible, the building should be downwind and downhill from sensitive areas, such as homes, play areas, feedlots, animal shelters, gardens, and groundwater sources.
- The building should be located in an area not subject to flooding.
- A drainage system should be built to collect any tank rinsing water or spills. This material should be treated as surplus pesticides and disposed of according to the label instructions.
- A water supply should be furnished for mixing, loading, tank rinsing and cleanup, and showers and cleanup for the persons who mix, load, and apply the pesticides.
- Fire detectors and fire fighting equipment should be available.
- A telephone and list of emergency numbers should be convenient.
- A current inventory of all materials in storage, along with a label of all materials, should be maintained in a secure place away from the storage area. The local fire department should be provided with an updated copy of the inventory.
- The storage area should be equipped with personal protective equipment and materials to handle accidents and spills. Activated charcoal, absorptive clay, vermiculite, clay-granule type cat litter, or sawdust are good materials to absorb liquid spills.
- All pesticides should be dated and identified when they are placed in storage. Store only what will be needed for one season. Establish a policy of "first-in, first-used" so that pesticides do not become outdated.
- Your pesticide storage facility should be inspected periodically by your fire insurance carrier. It is an excellent management practice and may reduce your insurance premium.

If drains are installed in the building or on the mixing/loading platform out-of-doors, the drain water must be captured to prevent contamination of ground or surface water. Few storage facilities have such drainage systems.

Mixing And Loading

Mixing and loading of pesticides are among the most dangerous tasks involved in working with these products because people are working with open containers of concentrated pesticides. For this reason, individuals employed to perform this activity should be well-informed of the danger involved and should work under the supervision of a certified, licensed applicator whenever handling "Restricted-Use Pesticides."

When mixing and loading, applicators should use all recommended personal protective equipment. The label will identify the dangers involved and the precautions to follow. Signs and symptoms of poisoning and recommended first aid procedures should also be found on the label.

After reading the label directions, make sure you have taken the following precautions before you begin to mix, load, and apply pesticides:

- Have detergent or soap and an adequate supply of water available.
- Know the early symptoms of poisoning for the pesticides you are using.
- Know the first aid procedures and have materials and supplies available.
- Have materials available to handle spills.
- Be sure that all equipment is functioning properly.
- Do not work alone; have help available if you get into trouble.
- Have all the recommended protective clothing and equipment available. Make sure the respirator fits properly and has the correct canister cartridge.
- Never eat, drink, smoke, or go to the bathroom while working with pesticides without first washing your hands.

You are now ready to begin mixing and loading. Follow these suggestions:

- Reread the label and follow the directions; pay special attention to the warnings and precautions.
- Only authorized mixers, loaders, and/or supervisors should be in the mixing and loading area.

- Work in a well-ventilated, well-lighted area.
- The pesticide container should be in a secure position when opening to prevent any spillage. Everyone should be wearing the proper personal protective equipment during this procedure.
- Stand with your back to the wind so that fumes or dusts are blown away from you.
- Mix and load on a concrete slab where spills can be contained. Avoid mixing or loading near surface water or near a well-head.
- Mix and pour concentrated pesticides below waist level. **Never pour pesticides at eye level.** A spill or splash could be disastrous. Immediately (within 2 minutes) remove clothing and wash yourself and your clothing thoroughly if pesticides are spilled or splashed on you.
- When pouring, stand with your head well above the spray tank to prevent pesticides from splashing in your face. Protect your eyes with splash-proof goggles.
- Never pour pesticides directly into a spray tank. Always mix and dilute in a small container.
- Pour the pesticide into water, never water into the pesticide.
- If stirring is necessary, use a stir stick, never your hand.
- Never overflow a spray tank.

After mixing and loading has been completed, your responsibility continues with the following procedures:

- Securely close pesticide containers immediately after use. Return unused pesticide to its proper storage area.
- Clean up all spills, no matter how small the amount.
- Wash mixing and loading pails, measuring devices, and stirring equipment or tools in strong detergent water. Rinse in clear water and store to air-dry.
- Wash your personal protective equipment in detergent, rinse, and hang to air-dry.
- The wash and rinse water used in steps 3 and 4 should be disposed of by pouring it into the spray tank. When originally filling the spray tank, leave room for the rinse water.
- Remove your clothing, and launder separately with heavy-duty liquid detergent and hot water. **DO NOT USE BLEACH** as it could cause a dangerous chemical reaction. Line-dry the clothing where it is exposed to sunlight.
- Take a hot shower, using a detergent-type soap. Do not forget to wash your hair. Put on clean clothing.

Application

When applying pesticides, you are not generally exposed to the same high concentration of pesticides as during the mixing and loading operation. However, the time-length of exposure is much longer; thus, the cumulative exposure may be equal to or greater than during the mixing-loading operation.

Pesticide applications are made with hand sprayers and dusters, irrigation equipment, large airblast orchard sprayers, and aircraft. Whatever equipment is used, many of the safety precautions are the same. These include the following procedures:

- Read and follow label directions. Applications which vary from label requirements are a violation of federal law.
- Use the correct equipment, and make sure it is properly maintained and adjusted. Screens, strainers, and nozzles should be cleaned and should function properly. Appropriate nozzles should be used and properly adjusted. All lines, valves, and seals should be checked for leaks.
- The application equipment should be accurately calibrated on a regular basis. If equipment is applying an inaccurate amount, recalibrate it. Your operator's manual should provide information on calibration. Additional information is available through your county Extension office.
- Wear the proper protective clothing and equipment.
- Check the weather forecast frequently to determine if conditions will be favorable for the application and effectiveness of the pesticide. The National Weather Service always provides an updated weather forecast.
- Avoid spraying near sensitive areas where drift could damage neighboring crops or the environment. When spraying must be done in these areas, attempt to spray when the humidity is high and when potential drift will be away from sensitive areas. Lower pressures, proper boom and nozzle adjustments, a larger nozzle size, and a drift reduction additive (if the label permits) will reduce drift.
- Do not make field adjustments to the sprayer in a recently sprayed, still-wet area. Move to an unsprayed area.
- Never attempt to clean a nozzle, screen, or hose by blowing or sucking on it with your mouth. Use small, soft, bristly brushes and/or an air pressure bulb.

- Never mix more pesticide than needed. If you do, avoid draining the spray tank onto the ground. Instead, empty the tank by spraying the entire contents onto vegetation or other areas for which it was intended.

For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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