



## No. 39: Pesticide Storage and Security

Amy E. Brown, Ph.D., Coordinator  
and  
Elizabeth Ingianni, M.S., Program Assistant  
Pesticide Education and Assessment Programs  
Revised June 2012

### IMPORTANCE OF SECURITY

Security of pesticide storage areas should always be a prime consideration for pesticide dealers, distributors, and users. The potential for harm through incidental exposure of people, especially children, who should not have access to the area, is one concern. Other concerns include environmental harm, vandalism or theft with possible misuse of products, and, unfortunately, the potential for use by terrorists and saboteurs.

Some pesticides (insecticides, fungicides, herbicides or weed killers, rodenticides, and any other chemicals that kill or control pests) can have rapid, highly visible effects on human health. Other pesticides can cause eye, skin, and respiratory irritation. Even products not considered to be highly acutely toxic could disrupt the infrastructure or cause panic if introduced into water sources, sprayed over populated areas, or otherwise misused.

This leaflet describes general good storage practices as well as considerations for preventing theft and/or accidental exposure from storage areas. Many of these guidelines apply to all types of pesticide storage areas. A few are appropriate only for dealers and distributors.

### STORAGE PRACTICES

**Maintain a separate location for the storage of pesticides.** The storage area should be at least 50 feet away from wells and 200 feet away from surface water. If the storage area is located within a larger structure, provide access through a separate outside door. Establish and maintain facility perimeter security through installing fencing, caging areas, or other means.

**Store pesticides away from food, feed, seed, and fertilizers.** These products could become contaminated with pesticide through fumes, spills, or leakage.

**Store pesticides away from areas used for other activities.** This will help limit possible exposures.

**Post the storage area appropriately to avoid accidental exposures.** Consider the need for posting this information in a second language as well as English. Also post “No Smoking” signs, and do not allow smoking in or near the storage area or facility. You can find downloadable signs on several websites by searching images for the key words “Danger,” “Pesticide Storage,” and “Keep Out.”

**Keep the storage area locked.** Limit access to all storage areas, and tightly control access keys. Keep a list (in a separate place, such as an office) of all individuals with keys. Do not allow customers or unauthorized people to have access to the storage area, even during business hours. Make sure to collect the keys if someone leaves your employment or if responsibilities change.

**Assure that locks are case-hardened, tamper-resistant, and in top working order.** Use cable seal locks to secure individual storage containers.

**Consider installing security and surveillance systems.** Movement-activated lighting, video cameras, and alarms are examples of systems that could be installed. Check systems frequently to make sure they are functioning fully. Dogs can also be effective deterrents against criminal activity.

**Ventilate the storage area.** Appropriate ventilation will depend in part on the size of the storage area. Windows should not be large enough for someone to enter. Air from the storage area should never be vented into another room.

**Control temperature and moisture in the storage area.** Water or humidity, temperatures extremes, and sunlight can degrade the pesticides or their packaging. Check the labels to determine the appropriate temperature range. Keep the storage area dry, and do not store pesticides in areas that are damp, near waterways, or at risk of flooding. This protects both the pesticides and the environment.

**Use non-porous flooring, shelving, and pallets.** Sealed cement, glazed ceramic tile, or other non-porous floors, and metal or plastic shelves and pallets are easier to clean and decontaminate. Avoid carpeting, wood, soil, or other porous or absorbent materials that cannot be properly decontaminated. Recessed floors that slope into a containment system can also help contain spills or leaks.

**Store pesticides only in their original containers.** Make sure the label is intact and all information is legible. Never reuse food or beverage containers to store pesticides. Such containers are not designed to hold pesticides or pesticide solvents and might degrade, causing the product to leak out. Also, serious illnesses and deaths have occurred when people, especially children, unwittingly ingested pesticide stored in food or beverage containers.

**Inspect the storage area regularly, and maintain a log of the inspection procedure.** Keep the storage area in good repair. Check pesticide containers for damage such as cracks, tears, or corrosion. Appropriate action for dealing with leaks or damage depends on the situation, but may involve immediate use of the pesticide, secondary containment, or transferring the pesticide and its label to another appropriate container for disposal.

**Until they are actually disposed of, keep products and empty containers you plan to dispose of inside the locked storage area.** If they must be placed outside for pick-up, make an appointment, move them outside just before the scheduled time, and have a responsible person stay with them until pick-up.

**Maintain an updated inventory of products in a separate central location.** If the inventory list is stored along with the pesticide, it will not be available during emergencies. List at least the product name, date of purchase, and location within the storage area.

**Maintain copies of Material Safety Data Sheets (MSDS) in a separate central location.** This information will be necessary in case of spills, fires, or other emergencies. As with the inventory list, store MSDSs separately from the storage area so that a copy can be accessed in case of an accident.

**Post the name, address, and telephone number of at least one contact person at the primary entrance to the storage area.** Keep another copy of this information separately, such as in a central office. Indicate the location of the nearest telephone.

**Post important telephone numbers in a prominent place.** Make sure emergency telephone numbers (Poison Control Center, police, and fire department) as well as pesticide regulatory agency numbers are posted in both the storage area and a separate central location.

**Store personal protective equipment (PPE) separately from the storage area.** Some types of PPE stored in pesticide storage areas could absorb pesticide fumes, shortening the effective protective life of the

PPE. Also, in the event of a pesticide emergency, you will need to access and put on your PPE before going into the storage area.

**Keep pesticide application equipment secure.** Equipment small enough to be carried should be locked in a shed or other appropriate storage area. Control the number of keys to the area, and maintain a list of individuals who have keys. Never leave ignition keys in application equipment (tractors, airplanes, etc.).

**Lock pesticide transport vehicles whenever the driver is away from the vehicle.** Do not leave vehicles containing pesticide unattended, and never leave pesticides unsecured. Ensure that unauthorized persons cannot get into vehicle compartments where pesticides are stored, such as open truck beds. Be aware of the potential for siphoning or otherwise stealing pesticide from filled tanks such as mini-bulk equipment.

**Where possible, aircraft as well as crop protection products should be stored in locked hangars with electronic security systems.** Loader trucks, forklifts, or other equipment may also be parked and temporarily disabled in such a manner as to block movement of the aircraft. In cases where hangar space is not available and aircraft must be left outdoors, propeller chains, locking high strength tie down chains, or blocking equipment are practical alternatives. Consider installing hidden security switches to prevent unauthorized starting of aircraft, but be sure to maintain compliance with FAA regulations governing aircraft modification.

**Do not sell or give pesticides to someone you do not know.** If you do sell pesticides, make sure the buyer has appropriate documentation.

**Be alert to unusual or suspicious activities.** Stay aware of unusual activities in or near your storage area as well as during transport and application of pesticides. Also instruct your employees to maintain enhanced security awareness. Indications that something is amiss may include unusual behavior by a purchaser or other individual who:

- seems unfamiliar with details of using an agrochemical;
- acts nervous, seems uneasy or vague, and avoids eye contact;
- demands immediate possession of purchased material instead of available future delivery;

- asks for material in smaller, individual containers rather than in bulk; or
- insists on paying with cash instead of using credit or a check.

**Promptly report any thefts of pesticides or equipment and any suspicious activity to designated authorities:**

- Your local law enforcement agency.
- The Federal Bureau of Investigation (FBI) field office. Information on the location of the nearest FBI office is available at [www.fbi.gov](http://www.fbi.gov).
- The Maryland Department of Agriculture, Pesticide Regulation Section, Annapolis, MD at **410-841-5710**.

## SOURCES

Agency for Toxic Substances and Disease Registry. 2001. ATSDR Environmental Data Page: Industrial chemical and terrorism: Human health threat analysis, mitigation, and prevention. Centers for Disease Control, Atlanta, GA.

Bellinger, Robert G. 1996. Store *Pesticides Safely*. PIP-37, Pesticide Information Program, Clemson Univ., Clemson, SC.

Brown, Amy E. 2012. *Pesticide Safe Use Checklist*, Pesticide Information Leaflet No. 11, Pesticide Education and Assessment Program, Department of Entomology, University of Maryland Extension, College Park, MD.  
[http://pesticide.umd.edu/products/leaflet\\_series/leaflets/PIL11.pdf](http://pesticide.umd.edu/products/leaflet_series/leaflets/PIL11.pdf).

Deutsch, Allan. 2001. IPMnet NEWS, Issue 94. Oregon State University, Corvallis, OR.

Idaho State Department of Agriculture. 2001. *Pesticide Updates! Emergency Alert! Pesticide Security*, Special Issue, October 5, 2001. Division of Agricultural Resources, ID St. Dept. of Ag., Boise, ID.

Maryland Department of Agriculture. 2001. MDA Pesticide Enforcement Alert, Vol. 2, No. 1. Pesticide Regulation Section, MDA, Annapolis, MD.

National Agricultural Aviation Association. 2001. *Security Considerations for Agricultural Aircraft Operators*. North Dakota Pesticide Quarterly, Vol. 19, No. 4. <http://www.agaviation.org/content/agricultural-aviation-security> (Membership is needed to access this archive. A copy of the newsletter can also be found at: <http://www.ext.nodak.edu/extnews/pestqtrly/pq19-4.htm#Security>).

Schulze, Larry D. 2001. *The Label*, Vol. 13, No. 8. Pesticide Education Office, University of Nebraska, Lincoln, NE.

United States Environmental Protection Agency. 2000. *Chemical Accident Prevention: Site Security, Chemical Safety Alert*. Chemical Emergency Preparedness and Prevention Office. <http://www.epa.gov/emergencies/docs/chem/secale.pdf> (Accessed May 9, 2012).

United States Environmental Protection Agency. *Pesticide Consumer Alert*, Security Fact Sheet. EPA Office of Pesticide Programs. [http://www.epa.gov/pesticides/factsheets/pest\\_secu\\_alert.htm](http://www.epa.gov/pesticides/factsheets/pest_secu_alert.htm) (Accessed May 9, 2012).