



## Consider Zero Pesticide Storage<sup>1</sup>

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Farmers have heard for years that they should keep pesticides in locked storage areas. They also know that pesticides should never be stored near food, feed, fertilizer or seed because of contamination problems. And farmers know that pesticides exposed to excessive temperatures can be ineffective or unusable.

Many operators have eliminated these problems by not keeping any pesticides in long-term storage. The Extensive Service also promotes this new concept of Zero Pesticide Storage, or ZPS.

All farmers may not achieve ZPS immediately, however, they can reach that point in two to three years with a few key management strategies.

### PRIORITIZE PESTICIDES FOR DISPOSAL

Start by knowing what pesticides you have in storage. Then get rid of unwanted or unneeded products safely at the next Toxic Waste Cleanup Day in your area.

Products with the highest priority for disposal include pesticides in the following categories:

- **Canceled pesticides**, such as DDT or chlordane. These pesticides are illegal and endanger your health

and the environment. (See Table 1 for a list of canceled products.)

- **Unusable pesticides**, made ineffective or dangerous by lengthy or poor storage conditions. Extreme temperatures and the passage of time can alter a pesticide's chemical formula and make it risky to apply.
- **Unlabeled pesticides**, because the applicator may be unsure of the product's identity and proper application rate. Unlabeled pesticides are often in unsafe containers, so be sure the item can be properly taken to a cleanup site (see "Transport Pesticides Safely"). Only identifiable pesticides are accepted at these sites. If you have an unlabeled pesticide, contact the Iowa Department of Natural Resources for the name of a laboratory that can analyze and identify the product.

Pesticides with second-priority disposal include the following products:

- **Unwanted pesticides**, which are still usable but no longer needed in your home or farm operation. For a farmer, this category might include herbicides no longer used but safe for application. For a homeowner, this might include items such as flea or tick spray in a household that no longer has a dog or cat.

## IOWA STATE UNIVERSITY

University Extension

1. This document is Fact Sheet Pm-1518a, a series of the Safe Farm Program, Iowa State University Extension, Ames, Iowa. Safe Farm promotes health and safety in agriculture. It is funded by the National Institute for Occupational Safety and Health, Iowa State University, and a network of groups that serve Iowa farm workers and their families. Publication date: January 1993.
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**Table 1.** These pesticides have been canceled for most uses

aldrin	endrin
carbon tetrachloride (liquid fumigant)	EPN
chlordane	heptachlor
chlordimeform	kenones
daminozide	pentachlorophenol
DBCP	silvex/2,4,5-T
DDT	2,4,5-TCP
dieldrin	toxaphene
dinoseb	trichlorophenol
ethylene dibromide (liquid fumigant)	

Many farmers find that the first three categories account for more than half of what they have in storage. By properly disposing of them, they eliminate a multitude of potential environmental and health risks that could arise as a result of a fire, tornado, or animals and vandals entering the storage area.

### TRANSPORT PESTICIDES SAFELY

When transporting pesticides to a Toxic Waste Cleanup site, follow these guidelines:

- Handle pesticides with care and always wear rubber gloves. Avoid breathing, touching, or ingesting pesticides. Always wash hands after handling pesticides or containers.
- Transport pesticides in the pickup bed or car trunk, never in the passenger area. Be sure pesticide containers are in good condition, and fasten them securely in the vehicle so they cannot tip, spill, or break.
- If a pesticide is not in its original container but you have its label, bring the label with you to help identify it.

For more information about disposing of pesticides, contact the Iowa Department of Natural Resources at 800-367-1025.

### MINIMIZE STORAGE

To further minimize storage, consider these practices:

1. Take a pesticide inventory of remaining usable products. With an inventory, a farmer can determine exactly how much more product needs to be ordered for one year's application. This eliminates over-ordering and storage.
2. Take delivery right before application. Storage time can be shortened to weeks or days.
3. Use mini-bulk systems when possible.
4. Return unopened containers to your dealer, if possible.
5. Use last year's chemicals first and avoid carryover in the future.
6. Consider applying small amounts of unwanted labeled pesticides to a labeled site.

### STORE PESTICIDES SAFELY

Pesticide storage is deadly serious. Half the pesticide-related deaths in the United States are of children under the age of 10. To control access, lock pesticides securely in a storage area. The area should have proper ventilation and a warning sign on the door or window. Ideally, stored pesticides should not be exposed to freezing or extremely hot temperatures.

By following these practices and ridding an operation of unusable products at Toxic Waste Cleanup Days, pesticide storage can be reduced to zero. For some operators, ZPS is a goal they can achieve 10 months of the year which, of course, is a valuable accomplishment.

### FARMSTEAD SAFETY

#### How Much Do You Know?

1. Which of the following can damage stored pesticides and make them unusable or ineffective?
  - a. excessive heat
  - b. excessive cold
  - c. lengthy storage
  - d. all of the above
2. A Toxic Waste Cleanup Day is a good place to dispose of canceled, unwanted, or unusable pesticides. True or false?
3. Even when safely locked away, pesticides can pose environmental risks. True or false?

4. Farmers can return opened containers of pesticides to their dealer even if they have used a small amount. True or false?
5. Which activity does not help an operator achieve Zero Pesticide Storage?
  - a. using mini-bulk systems
  - b. returning unopened pesticide containers
  - c. using small amounts of pesticides around the house
  - d. taking canceled pesticides to a Toxic Waste Cleanup Day

See answers at the end of "What Can You Do?".

### What Can You Do?

Zero Pesticide Storage can significantly reduce the risk of environmental and health problems. Follow these guidelines:

- Take canceled, unwanted, or unusable pesticides to a Toxic Waste Cleanup Day.
- Take an inventory of usable products and use last year's leftovers first.
- Order only enough for one year's application.

- Use mini-bulk systems.
- Return unopened containers to the dealer if possible.
- Take delivery of pesticides right before application.

### Answers to quiz:

1-d; 2-True; 3-True; 4-False; 5-c

### FOR MORE INFORMATION

For more information on reducing pesticide storage, contact the Iowa Department of Natural Resources, the Iowa Department of Agriculture and Land Stewardship, or the Iowa Fertilizer and Chemical Association. You may also obtain the following resources from a local Extension office:

- *1992/93 Private Pesticide Applicator Study Guide, PAT-1.*
- *Minimizing Pesticide Disposal and Pesticide Storage* videotape.
- *Rinsing and Recycling Pesticide Containers, PAT-1442.*