



Work toward Zero Pesticide Storage

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. Iowa State University Extension and Outreach supports this concept called Zero Pesticide Storage.

All farmers may not achieve Zero Pesticide Storage immediately, but by implementing a few key management strategies they can reach that goal in 2 or 3 years.

Prioritize pesticides for disposal

Start by knowing what pesticides you have in storage. Then get rid of unwanted or obsolete products safely at Regional Collection Centers.

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

- **Canceled pesticides** are illegal and endanger your health and the environment. (See the back of this sheet for a list of canceled products.)
- **Unusable pesticides** include products made ineffective or dangerous by lengthy or poor storage. Extreme temperatures and the passage of time can alter a pesticide's chemical formula and make it a poor choice for application effectiveness.

Unlabeled pesticides are also unusable. The applicator may be unsure of an unlabeled 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 next page). 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.

- **Unwanted pesticides** include products that are still usable but no longer needed in your home or farm operation. For a farmer, these products might include herbicides no longer used but safe for application. For a homeowner, items might include flea or tick spray in a household that no longer has a pet.

Minimize storage

By properly disposing of canceled, unusable, and unwanted pesticides, many farmers can cut their pesticide inventory in half. Remaining products, however, still pose some environmental and health risks on a property due to their presence during extreme conditions such as fire, tornadoes, and vandalism.

To further minimize storage, a good farm manager should adopt the following practices:

1. Inventory remaining usable pesticides. A farmer can determine exactly how much additional product to order for 1 year's application and thereby eliminate over-ordering and storage.
2. Use last year's leftover pesticides first and avoid carryover in the future.
3. Return extra, unopened containers as soon as possible, if your dealer will accept them.

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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. Even when safely locked away, pesticides can pose environmental risks. True or false?
3. Farmers can return opened containers of pesticides to their dealer even if they have used a small amount. True or false?
4. Which activity does not help an operator achieve Zero Pesticide Storage?
 - a) using mini-bulk systems
 - b) returning unopened pesticide containers
 - c) stocking up on pesticides when on sale
 - d) taking canceled pesticides to a Regional Collection Center

See answers on back.

4. Take delivery right before application to shorten storage time to weeks or days.
5. Use mini-bulk systems when possible.

Store pesticides safely

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

Always keep pesticides in their original containers; never store them in food containers or bottles. To avoid contamination, keep pesticides away from animal feed, fertilizers, and other products.

Transport pesticides safely

When transporting pesticides to a Regional Collection Center, follow these guidelines:

- Handle pesticides with care and always wear rubber gloves. Avoid breathing,

touching, or ingesting pesticides. Always wash hands after handling pesticide containers.

- Transport pesticides in the bed of a truck, never in the passenger area. Be sure pesticide containers are received in good condition; fasten them securely 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 pesticide disposal, contact the Iowa Department of Natural Resources at (515) 281-5859.

By following the practices in this fact-sheet and disposing of unusable products at Regional Collection Centers, you can eliminate or significantly reduce pesticide storage. Some operators can achieve Zero Pesticide Storage for 10 months of the year—a valuable accomplishment.

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The following pesticides have been canceled for most uses:

aldrin	dicrotophos	methyl parathion
arsenicals	dieldrin	mevinphos
azodrin	dinoseb	monocrotophos
binapacryl	EDB	nitrofen
cadmium compounds	endrin	parathion
captafol	EPN	pentachlorophenol
carbon tetrachloride	fluoroacetamide	phosphamidon
chloranil	heptachlor	safrole
chlordane	Kepone	silvex
chlordimeform	leptophos	strychnine
chlorobenzilate	Lindane	2,4,5-T
daminozide	mercury compounds	toxaphene
DBCP	methamidophos	trichlorophenol
DDT	nitrofen	

For more information

For more information on reducing pesticide storage, contact the Iowa Department of Agriculture and Land Stewardship or your local county extension office:

Private Pesticide Applicator Study Guide, PAT 0001.

Managing Pesticide Containers, PAT 50.

... and justice for all

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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 Regional Collection Center.
- Inventory usable pesticides and use last year's product first.
- Order only enough for one season'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-False; 4-c



Safe Farm is an Iowa State University Extension and Outreach project helping to make Iowa farms a safer place to work and live.

For more safety information, check the web at: www.abe.iastate.edu.