



Secure Pesticide Storage: Using and Managing a Pesticide Storage Facility¹

Thomas W. Dean²

This document identifies and describes six practices that together form a use and management plan for a pesticide storage facility.

Introduction

A combination of six fundamental practices make up pesticide storage facility use and management. These are:

- store only pesticides
- follow label instructions
- organize pesticide stocks
- cargo handling practices
- facility inspection
- emergency response

Store Only Pesticides

For security's sake, every authorized storage facility user should understand that a pesticide storage facility is a *specialized place*.

There are **only three (3) kinds of things that belong** in a pesticide storage facility:

- containers that have pesticide them
- materials and supplies used for cleaning the storage facility
- materials used for keeping storage facility records

Everything else belongs somewhere else.

Teach every authorized user that non-pesticidal items such as:

paint, solvents, fuels, lubricants, chain saws, mower parts, backpack sprayers, nozzle tips, hose, tape, tools, plumbing parts, rope, medicines, fertilizers, feeds, foods, seed, boots, gloves, hats, respirators, measuring devices, triple-rinsed pesticide containers, etc., should **NEVER** be brought into a pesticide storage facility.

1. This document is Fact Sheet PI-33, part of a series from the Pesticide Information Office, Food Science and Human Nutrition Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. For additional information, contact the Pesticide Information Office, University of Florida, P.O. Box 110710, Gainesville, FL 32611-0710, (352) 392-4721. Published: April 2004. Revised: November 2004. Please visit the EDIS website at <http://edis.ifas.ufl.edu>.

2. Thomas W. Dean, Ph.D., assistant extension scientist, Pesticide Information Office, Food Science and Human Nutrition Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, 32611-0710.

All such things belong in a paint closet, equipment storage shed, gear locker, barn, toolbox, workshop, mix/load site, trash can, or some other place. They do **NOT BELONG** in a pesticide storage facility.

Follow Label Instructions

Virtually every registered pesticide product's label says something about that product's storage.

Train every authorized user to always *find and read each product's label language about storage*.

After having read a pesticide's label, each authorized user must make sure that his or her actions with that product in the storage facility fully obey that pesticide's label statements.

Organize Pesticide Stocks

Organization of pesticides kept in a storage facility is built around three basic things:

- date of entry
- type of pesticide
- type of container

Date of Entry

Use a permanent marker and write (on each pesticide container) the *date that container first entered* the pesticide storage facility.

Have every authorized user follow a *first-in-first-out* product use policy. This reduces storage facility buildup of outdated (unserviceable) pesticide products.

On each shelf, *arrange each product's dated containers* from left-to-right (rather than from front-to-back). This lets a user easily retrieve the oldest stock without ever having to reshuffle shelved material.

Type of Pesticide

Designate a specific place for storing each type of pesticide kept in the facility. The idea is to *keep each major type of pesticide (insecticides, fungicides, herbicides, growth regulators, etc.) stored separately*.

Keeping different types of pesticide separated helps prevent product cross-contamination. It also reduces the likelihood of retrieving (and then mistakenly applying) the wrong type of pesticide.

Teach each authorized storage facility user exactly where in the facility to store and retrieve each type of pesticide.

Type of Container

Always *arrange containers on shelves by type*. The goal is to minimize pesticide product cross-contamination while maximizing container protection. This combination helps ensure each pesticide product remains usable.

Put breakable containers (glass bottles) *on the lowest shelves*. A glass bottle stored close to the floor has less distance to fall. In result, it is less likely to break than one kept on higher shelving.

Leakage drips downward, never up. This simple fact is the basis for arranging non-glass pesticide containers on storage shelving. Thus, store sturdy *non-glass containers* (plastic jugs, cans, etc.) holding liquids *on the central shelves* (i.e., above glass and below absorbent containers of dry formulations).

Store *absorbent packages* (bags, paper cartons, etc.) *on the uppermost shelves*. This prevents absorbent containers of dry formulations from becoming soaked by any liquid product that happens to leak.

It's always best to store every pesticide product in its original container. However, if an original pesticide container is no longer usable (broken, punctured, etc.) store its contents in an intact and suitably marked temporary container until the pesticide is used. Manage both the original and temporary containers in accordance with that pesticide product's label directions.

Cargo Handling Practices

Train every authorized user to make sure every partially-used container is *securely closed before it enters* the storage facility.

Storage facilities are **not** mix/load sites. There is no good reason to ever purposefully open a container of pesticide in a storage facility. (The only exception to handling pesticide in the storage facility involves leaking containers -- not purposefully opened ones).

Therefore, while in a storage facility, each pesticide container should always stay closed. Handling pesticide occurs only when a container of pesticide is open. Thus, *handling closed containers is not the same as handling pesticide*.

Handling closed containers (in other words: carrying or moving closed jugs, bags, boxes, or cases of containers) is **cargo handling**. Safe cargo handling involves using proper lifting and carrying techniques. It may also involve use of hand trucks, dollies, pallet jacks, fork lifts, etc.

The **personal protective equipment (PPE)** used by a cargo handler is **different** than that used by a pesticide handler. Cargo handlers need equipment primarily designed to protect against lifting/carrying injuries. Such equipment includes steel-toed shoes, leather work gloves, and back support devices.

When lifting or carrying closed pesticide containers in or out of a storage facility, cargo handlers should **not** be wearing items designed for pesticide handler protection.

Wearing pesticide handler PPE items during cargo-handling can decrease workplace safety by causing grip loss, distraction, or missed footing. Such conditions cause clumsy work and promote accidents. The most likely result: cargo being carried in (or out of) the storage facility gets bumped or dropped and a pesticide spill occurs.

To reduce the chances of such accidents, make sure authorized facility users do **not** wear pesticide handler PPE during cargo-handling work.

Remember: pesticide handler PPE is needed only for work involving open pesticide containers, or un-contained pesticide (e.g., spray mix, spills, etc.)

Facility Inspection

Train every authorized user to inspect the storage facility's condition **every time** he or she uses it.

Each inspection should verify the following are adequate, serviceable, and secure:

- external condition of roof and walls
- facility signs
- door lock
- facility spill containment
- facility entranceway
- facility floor cleanliness
- fire extinguisher charge
- facility lighting
- exhaust fan operation
- shelving cleanliness and integrity
- stored product organization
- record keeping materials
- spill cleanup supplies
- spill cleanup PPE (kept outside the storage facility; for example, in the truck or in a separate PPE locker), and
- facility cleaning/maintenance supplies.

This may seem a long list and big task. But it's not. In a well-ordered, mid-sized (10' X 20') pesticide storage facility, such an inspection usually takes less than 3 minutes. The expenditure is well worth the return.

Emergency Response

Get local fire department and law enforcement officials to help develop an emergency response plan.

Make sure local authorities understand exactly **where** to find, and **what** is kept in, *your storage facility*. The best way to do this is to regularly

provide them with up-to-date descriptions of your storage facility's:

- location
- floor plan
- current inventory

Last, but not least -- be sure every authorized facility user clearly understands what his or her emergency response actions should be while waiting for trained help to arrive.

Security—for pesticide storage facilities, or anything else—is never accomplished by a well-made structure alone. The structure is just a start. The rest is ongoing effort.

In day-to-day practice, security equally relies on habitual attentiveness to the details of thoughtful use and management practices.