How to (And How Not to) Store and Transport Pesticides

Fred Fishel
UF/IFAS Agronomy Dept. &
Director UF/IFAS Pesticide Information Office
Outline

What’s new with the Pesticide Education Program?

Pesticide storage:
  Facility
  Transport vehicle

Examples of what to do...........and not to do
What’s new with the Pesticide Education Program?

New exam study materials (written manuals)
Core manual
Aquatic manual
What’s new with the Pesticide Education Program?

Study materials (Interactive DVDs)
- Core
- Aquatic
- Right-of-Way
- Natural Areas Weed Management
What’s new with the Pesticide Education Program?

Interactive DVDs

The manuals’ contents are now presented:
1. Fully-narrated audio PowerPoint format
2. With the full written text also provided
3. With interactive review questions
Who needs CEUs?
Help me!
I expire in about 30 days.
I’m 2 CEUs short.
The next program within 200 miles is in 3 months.
I just can’t take the *%#@ test again!
Online CEUs

- Approved for FL and GA applicators
- More than 50 modules available
- Most are approved for 1 CEU ($20)
- Several approved for multiple CEUs

www.onlinepesticideCEUs.com
Is this your storage facility?
How about this one?
How about this one?
So, what does a good storage facility supposed to have and look like?
Let’s go in and take a look.

How do I know what to look for???
III. PESTICIDE STORAGE

1. Are RUP's stored in a secure manner? [ ] Yes [ ] No [ ] N/A

2. Are pesticides stored according to label directions? [ ] Yes [ ] No [ ] N/A

3. Condition of storage area appears not to injure or endanger water/humans/wildlife/livestock/crops? [ ] Yes [ ] No [ ] N/A

Comments: ____________________________

II. HISTORY OF BUSINESS

Corporate/Company Officers Title and Responsibility

Name and Address of Related Firms: ____________________________

Persons Interviewed ____________________________ Title ____________________________

Number of Licensed Applicators at Firm: ____________________________

III. PESTICIDE STORAGE

1. Are RUP's stored in a secure manner? [ ] Yes [ ] No [ ] N/A

2. Are pesticides stored according to label directions? [ ] Yes [ ] No [ ] N/A

3. Condition of storage area appears not to injure or endanger water/humans/wildlife/livestock/crops? [ ] Yes [ ] No [ ] N/A

Comments: ____________________________
STORAGE AND DISPOSAL

STORAGE: Always store pesticides in a secured warehouse or storage building. Store at temperatures above 32° F. If allowed to freeze, rewarm to 40° F; remix thoroughly before using. This does not alter this product. Containers should be opened in well-ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not store near open containers of fertilizer, seed or other pesticides. Do not contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed, labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate ground water. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA regional office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent), adding rinsate to spray tank. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.
Make a Checklist

• 4 major categories:
  – General information
  – Pesticide containers
  – Spills and disposal
  – Safety information
1. General Information

- Clean, neat storage site
- Current, on-site inventory list
- Posted emergency phone numbers
- Labels/MSDSs on file
- Accurate storage inspection log kept
What’s wrong here?
Current On-site Inventory List
<table>
<thead>
<tr>
<th>Type</th>
<th>Names</th>
<th>Phone Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergencies that deal with Facilities/Maintenance</td>
<td>Roxy Hoover</td>
<td>(863) 956-1462</td>
</tr>
<tr>
<td></td>
<td>Dan Tuzzolo</td>
<td>(863) 984-9349</td>
</tr>
<tr>
<td></td>
<td>Wayne Tyler</td>
<td>(863) 299-8644 or (863) 258-6417</td>
</tr>
<tr>
<td></td>
<td>Bruce Robertson</td>
<td>(863) 299-2738 or (863) 289-0768</td>
</tr>
<tr>
<td></td>
<td>Kevin Troelsen</td>
<td>(863) 956-5654</td>
</tr>
<tr>
<td></td>
<td>Diamond Basraw</td>
<td>(863) 956-5592</td>
</tr>
<tr>
<td></td>
<td>Mike Daugherty</td>
<td>(863) 294-3905 or (863) 604-2071</td>
</tr>
<tr>
<td>Hazardous Waste Spills</td>
<td>Dan Tuzzolo</td>
<td>(863) 984-9349</td>
</tr>
<tr>
<td>Security Mishaps/Accidents, Fights, Thefts</td>
<td>Dan Tuzzolo</td>
<td>(863) 984-9349</td>
</tr>
<tr>
<td></td>
<td>Lake Alfred Police Dept</td>
<td>911</td>
</tr>
<tr>
<td>Emergencies</td>
<td>Fire</td>
<td>911</td>
</tr>
<tr>
<td></td>
<td>Lake Alfred Police Dept</td>
<td>911</td>
</tr>
<tr>
<td>Spill Emergency Phone Numbers</td>
<td>Medical Emergency</td>
<td>911</td>
</tr>
<tr>
<td></td>
<td>Police</td>
<td>911</td>
</tr>
<tr>
<td></td>
<td>Ambulance</td>
<td>911</td>
</tr>
<tr>
<td></td>
<td>Fire Department</td>
<td>911</td>
</tr>
<tr>
<td></td>
<td>Winter Haven Hospital (First Care)</td>
<td>(863) 291-5200</td>
</tr>
<tr>
<td></td>
<td>Poison Control Center</td>
<td>1-800-345-6789</td>
</tr>
<tr>
<td></td>
<td>Polk County Emergency Management Ctr</td>
<td>(863) 534-0360</td>
</tr>
<tr>
<td></td>
<td>National Response Center</td>
<td>1-800-424-8802</td>
</tr>
</tbody>
</table>
2. Pesticide Containers

- Containers marked with purchase date
- Herbicides kept separately
- Stored in original containers
- Labels attached/legible
- Caps tightly closed
- Pesticides stored off floor
- Dry formulations on pallets
- Used containers rinsed and punctured
- Rinsed and unrinsed containers separated
Containers Marked with Purchase Date
What’s wrong here?

Store in Original Containers!
Could this happen to you?

Columbia, Mo., Thursday, June 19, 1997

One woman dies after drinking bug killer stored in wine bottle

ATLANTA (AP) — Someone decided to use an old wine bottle to store a highly toxic bug killer. One Lowe, 42, was in serious condition today at DeKalb Medical Center. Lowe’s hometown was unavailable didn’t know who it was.

Neighbors at the Decatur apartment complex where one of the members of the DeKalb County Fire Department’s hazardous materials team and police evacuated and decontaminated the apartment where the women ingested the substance believed to contain organic phosphate, a chemical commonly used in insecticide.

Jan Heuett, 45, of Decatur, Ga., from the poison, and Barbara iron and struggling to breathe yesterday afternoon, said Patricia Horton, the hospital’s director of critical-care and emergency room services.

Fire officials said the women unknowingly consumed the pesticide after someone carelessly stored it in an empty wine bottle. Investigators thing else in there to store it.”

The medical staff who dealt with the women were treated and later returned to work, while the room was sealed off and the contaminated air was filtered out, hospital spokesman Linda Tierney said. “At no time were other patients in jeopardy,” she said.
What’s wrong here?

Keep labels attached and legible!
What do you do if the label comes off and is lost?

• Mark the container with basic information
  – Trade name
  – Common name
  – EPA registration number
  – Amount of active ingredient(s)
  – Signal word
  – Use classification
  – Manufacturer

• Then request a replacement from the dealer
What’s wrong here?

Keep pesticides stored up off floor!
What’s wrong here?

Keep dry formulations on pallets!
What’s wrong here?
Used containers rinsed and punctured!
3. Spills and Disposal

- Storage area free of spills and leaks
- Spill kit available
- Floor drains sealed (if present)
What’s wrong here?

Storage area free of spills and leaks!
Keep a spill kit available!
Spill Kit Contents

- Chemical-resistant gloves
- Chemical-resistant coverall
- Chemical-resistant boots
- Chemical splash goggles
- Respirator
- Temporary hazardous material storage bag
- Absorbent pad for water- or solvent-based chemicals
- Absorbent tube sock (containment snake)
- Bentonite/polymer mix paste for plugging leaking containers
- Floor absorbent granules
- Shovel or broom
- Dust pan
- Warning sign
Cleaning up the Spill

- The 3 C’s of spills:
  - Control
  - Contain
  - Cleanup
4. Safety Information

- No smoking signs posted
- No food, feed, or fertilizers
- Safety equipment separated from pesticides
- Fire extinguisher (and it works)
- Storage room/building locked
- Room/building posted: Pesticides – Keep Out
- Site well lit and ventilated
What’s wrong here?

No food in the storage area!
What’s wrong here?

Safety equipment separated from pesticides!
Site Security

- Theft reports during the past year: Lee, Palm Beach, Martin, Hendry, and Manatee Counties
- All involved farm chemicals
- All occurred after the facilities were closed
Site Security Recommendations

- Secure buildings, vehicles, and equipment
- Secure computer system access: authorized personnel only
- Develop procedures and policies supporting security
- Inventory management policies: limit the amount
- Establish a procedure for locking up at closing
- Effective hiring practices
Fire Extinguisher

• How long has it been sitting there?
• Is the extinguisher inspected monthly?
• Has it been professionally evaluated this year?
• Are you and your employees trained to use it?
Transport Vehicles
What’s wrong here?

Don’t store pesticides in vehicle interiors!
Are these pesticides really secure?

Keep pesticides in vehicle lock boxes!
What’s wrong here?

Keep a spill kit in the vehicle!
Available from IFAS Bookstore

Building Plans and Management Practices for a Permanently-Sited Agricultural Pesticide Mixing/Loading Facility

SM-58

Thomas W. Dean and Ray A. Bucklin
Pesticide Information Office
Institute of Food and Agricultural Sciences
University of Florida
February 1997

Building Plans and Management Practices for a Permanently-Sited Pesticide Storage Facility in Florida

SM-57

Thomas W. Dean and Ray A. Bucklin
Pesticide Information Office
Institute of Food and Agricultural Sciences
University of Florida
February 1997
Thanks for your attention!