



GILA RIVER INDIAN COMMUNITY DEPARTMENT OF ENVIRONMENTAL QUALITY

PESTICIDE

CONTROL OFFICE

Community
Applicator
Certification
Training



Module 8:
Transportation
and
Storage
of
Pesticides

Image Credit: GRIC PCO



Transportation, Storage, and Security

This Module Will Help You:

- Understand how to properly store pesticides and restrict access
- Understand inventory and maintenance methods
- Understand how to prepare for potential spills
- Understand how to dispose of pesticide wastes





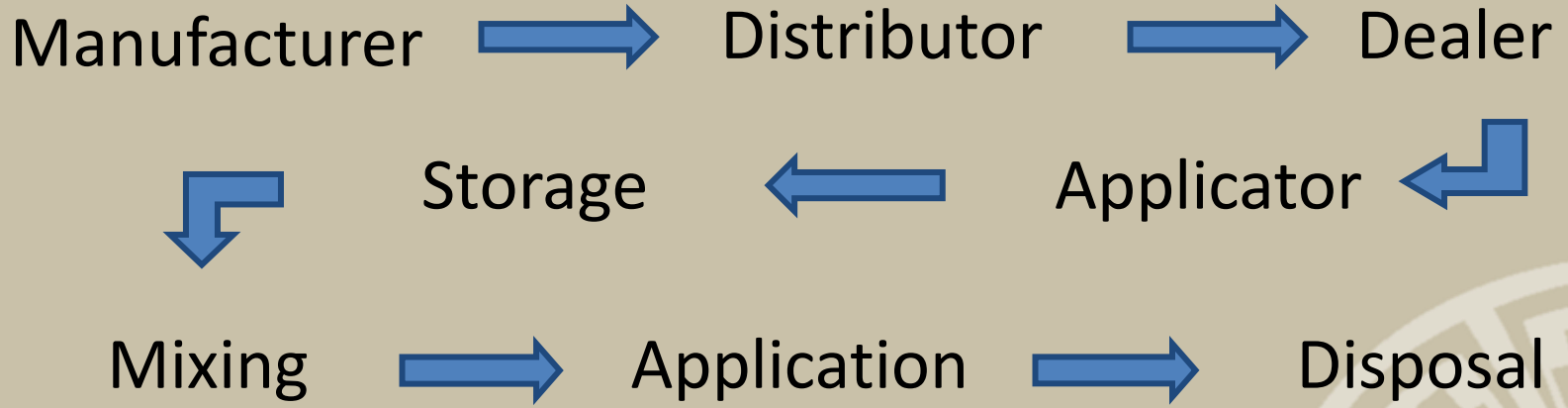
Safety and Security

- Unauthorized access to pesticides poses several concerns
- Pesticides that are not secured pose threats
 - Consider transportation, application, lunch time, storage
- Pesticides being transported or stored in an unsafe manner pose threats to human health, animals, and the environment





How Often are Pesticides Transported?



**Accidents
happen!**



Transportation and Storage





Maintain Vehicles



Image Credit: GRIC PCO

- Use side rails on trucks
- Check brakes, tires, and steering often
- Inspect tanks, fittings, gauges, hoses, booms, nozzles
- Look out for defects, cracks, and punctures
- **Carry tools for repair!**





Vehicle Owners and Operators are Held Responsible for Spills!...



Image Credit: University of Florida, Entomology

...and **MUST** be trained in emergency response procedures for spills and notification





Other Vehicle Precautions

- Inspect containers before loading:
 - Legible labels?
 - Tight seals?
 - Clean surfaces?
- Use tubs and liners for containment and cleanup
- Less handling of containers equals reduced likelihood of damage
- Secure load with tarps and tie downs





Keep Them Separated



Image Credit: North Carolina State University

- Keep people and animals away
- Food, feed, seed, and plants could become contaminated or poisoned
- Keep herbicides separate insecticides and fertilizers





Transportation Security



Image Credit: GRIC PCO

- Never leave unattended
 - Shipment, products in service vehicle
 - Secure pesticides
 - Use locking storage
 - Access from children
 - Protect from theft



Service Vehicle Requirements

- According to the Pesticide Ordinance, all **service vehicles** used in conjunction with a pest control application must have:
 - Measuring and pouring devices
 - Personal protective equipment and clothing
 - Absorbent materials
 - Over packs and/or other equipment to collect and store contaminated materials
 - First-aid kit
 - Poison control centers telephone number
 - Pesticide label and SDS for each pesticide
 - Change of clothing
 - At least one gallon of potable water
 - Soap and single use towels
 - Emergency eye wash kit



An Ideal Pesticide Storage Site Protects Against:

- Exposure to people and animals
- Environmental contamination
- Temperature extremes and excess moisture
- Theft, vandalism, and carelessness
- Liability





Pesticide Storage Requirements

- According to the Pesticide Ordinance, all **pest management businesses** must store their pesticides in a storage area that meets the following requirements:
 - Protected from elements
 - Floors, walls, and shelving built of a non-absorbent material
 - Adequate ventilation
 - Adequate lighting
 - Have emergency eyewash station
 - Have soap, fresh water and single use (disposable) towels;
 - Fire extinguisher, type ABC
 - First-aid kit
 - Emergency medical information, including telephone numbers for poison control centers;
 - Spill cleanup kit
 - Specimen label and safety data sheet for each pesticide stored
 - Sign placed at access point that warns pesticides are stored inside.



Secure the Site



Image Credit: GRIC PCO

- Use a dependable lock
- Post highly-visible warning signs on doors, windows
- Post “No Smoking” warnings, since many pesticides are highly flammable!
- Store pesticides only in original containers
- Never lend or borrow pesticides in unmarked or unlabelled containers
- Securely close containers when not in use



Shelf Life of Pesticides

- Keep inventory - mark each container with its purchase date
- Be aware of each product's shelf life
- Watch for excessive clumping, poor suspension, layering, abnormal coloration
- Poor pest control or plant damage may indicate the pesticide has deteriorated
- Avoid storing large quantities for long periods – inventory control – use older product first – buy only what you need





Check for Damaged Containers



Image Credit: GRIC PCO

- Inspect regularly for tears, splits, breaks, leaks, rust, and corrosion
- If found, put on PPE, clean up spills, and use immediately according to label instructions!
- Transfer to an appropriate container and label it





Service Container Requirements

- According to the Pesticide Ordinance, all **service containers** must be identified with the following requirements:
 - Name, e-mail address, if applicable, and telephone number of the applicator or custom applicator using the pesticide
 - Brand or trade name of the pesticide
 - EPA registration number
 - Name and percentage of the active ingredient
 - Dilution, if any, in the service container
 - EPA-assigned signal word (Danger, Warning, or Caution) for the registered label
 - The phrase “KEEP OUT OF REACH OF CHILDREN.”



Safety Tips

- Have duplicate copies of labels and SDS
- Wear the appropriate PPE
- Label all items used in handling pesticides



Image Credit: GRIC PCO



Safety Tips

- Have a spill response plan
- Have absorbent materials ready for spills and leaks
 - Clay, pet litter, vermiculite
- Have a shovel, broom, heavy-duty plastic bags available



Image Credit: University of Kentucky



Don't Generate Hazardous Waste!



Image Credit: GRIC PCO

- Leftovers = hazardous waste
- Dirty, empty containers
- Outdated products may lose effectiveness
- Cancelled products may not be legal
- Use it up before the expiration date!





Disposal of Pesticides and Containers





Follow the Label!

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

Pesticide Storage

Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

Pesticide Disposal

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. 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 of the nearest EPA Regional Office for guidance.

Container Handling [less than or equal to 5 gallons]

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.



Disposal and Recycling

- Triple-rinse or pressure-rinse all containers
- Add container rinse water to spray batch!
- Store clean containers in a special section
- Take clean containers for recycling
- **Recycle** containers through the GRIC waste disposal program or one supported by the Ag Container Recycling Council (ACRC)
- **Tank rinsates** may be stored and added to tank mixes for labeled sites

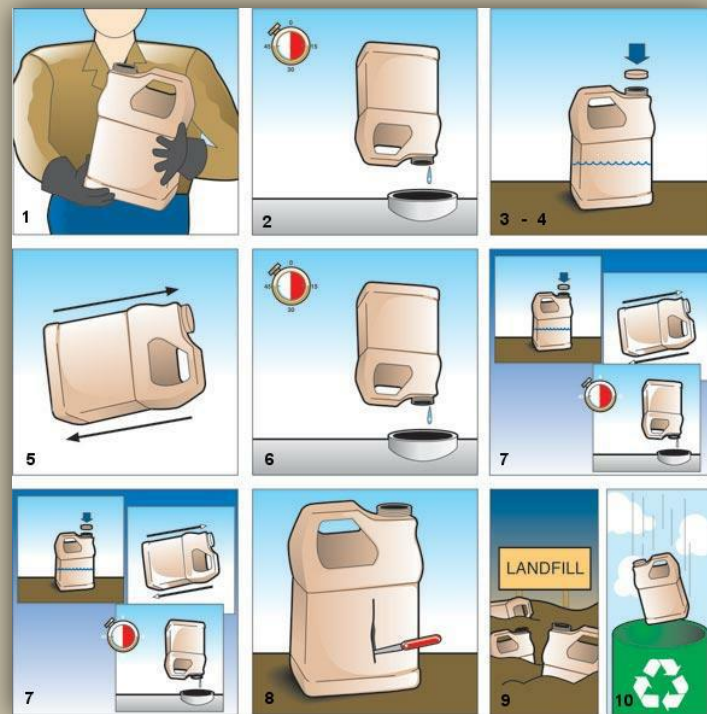


Image Credit: University of Nebraska,
Institute of Agriculture and Natural Resources



Prevention

- Keep storage areas locked
- Keep an updated and accurate inventory
- Communicate with police & fire units
- Routinely review, update, and practice emergency response procedures
- Keep an updated emergency telephone number list





Acknowledgements

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