



UNIVERSITY *of* NEW HAMPSHIRE  
COOPERATIVE EXTENSION

# Important Pesticide Management Issues

Pesticide Storage and Disposal, Worker  
Protection Standards

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# ***Pesticide Storage***



# *802.03 Storage*

## *Requirements (a)*

*The Label  
is the Law*

# *802.03 (b)*

- Pesticides should be stored in their original containers with ***LEGIBLE*** label attached



# *802.03 (c)*

- Pesticides and pesticide containers that have not been triple rinsed will be stored in the pesticide storage room



## ***802.03 (d)***

- Storage Room Protected and Secured to prevent access by children, animals and the general public



## ***802.03 (e)***

- Floor surface smooth, allowing for complete recovery of spills. Floor surface may be sealed concrete or plastic. Dirt floors PROHIBITED

# ***802.03 (f)***

- Storage Room identified with signage indicating pesticide storage;
  - Sign(s) to include the words; Danger, Warning or Pesticides and wording that indicates pesticides are in storage
  - Lettering of the words Danger, Warning and or Pesticides must be at least 1 ½ inches in height





## ***802.03 (g)***

- Pesticide Storage rooms shall be vented to the outdoors

## ***802.03 (h)***

- Store pesticides in a dry place and according to temperature requirements on the label. If fire suppression systems used or required, they should be in compliance with state fire code.



## ***802.03 (i)***

- Store Pesticides in tightly sealed containers free from tears, leaks, corrosion or breaks

# ***802.03 (k)***

- Pesticides shall be stored:
  - Minimum of 400 feet from public wells
  - At least 75 feet from:
    - Private wells
    - High water mark of surface waters
  - When possible, downhill from wells and surface water

# *802.03 (m)*

- Ambulance and Fire Department numbers as well as 911 displayed at a central location in conjunction with pesticide storage area



# ***802.03 (n)***

- Local Fire Department notified that pesticides are in storage and location of storage room

## *802.03 (0)*

- Storage rooms need sufficient light to see condition and labeling of containers

## ***802.03 (p)***

- Empty containers that have NOT been triple rinsed are to be stored in the storage room prior to disposal

# ***802.03 (r)***

- Cabinets, storage bins, lockers etc. are considered storage rooms as long as:
  - The facilities comply with the requirements of Pes 802.03 (except g)
  - If a single or combined storage area exceeds 15 Cubic feet, it has to be vented to the outside.



## ***802.03 (s)***

- No floor drains allowed, unless part of a catch basin

# ***802.03 (t)***

- Catch Basin allowed as long as:
  - No pipes attached
  - Allows for complete recovery of a spill
  - Allows for transfer from basin to an above ground container in the event of a spill or discharge onto the floor

## ***802.03 (u)***

- Pesticide storage area must be kept clean

## ***802.03 (v)***

- Spills and leaks must be cleaned up by the end of the day of their occurrence

# *802.03 (w)*

- Dormant oil, containing no other pesticide, is exempt from all but, 802.03a, 802.03b, 802.03j, 802.03k, 802.03t, 802.03u, 802.03v



# *Review*

- Why wear protective clothing when you are storing pesticides, containers and equipment?



# *Review*

- Why is a supply of soap and water necessary in the storage area?
- What other materials should be on hand?



# *Review*

- Why should the storage area be kept cool?
- Why should Herbicides be stored separately from other pesticides?



# *Review*

- What should you do if you discover one of your pesticide containers is corroding?
- Why should pesticides be stored in the original container when ever possible?
- Is it ever OK to give someone a bit of your tank mix?

# Pesticide Disposal

# Disposing of Surplus

## A. Prevent surplus:

Read the label before you buy  
Is the pest on the label?

Buy only what you'll need in the near future  
Effective shelf life  
Better pesticides may come along

# Disposing of Surplus

## A. Prevent surplus:

Think things through first.....don't be faced with a tank full of the wrong pesticide.

Mix only what you need.

# Disposing of Surplus

B. How to safely & legally dispose of surplus:

- If factory sealed, return to manufacturer
  - Talk to your dealer
- Apply excess mix to another crop on the label where a pest problem exists.

# Disposing of Surplus

How to safely & legally dispose of surplus:

- Use rinse water from spray tank in a future spray mix of the same pesticide

Be careful not to dispose of rinse water near public and private water sources

- Store surplus (w/ intact label) in locked storage until you can get rid of it.

# Disposing of Surplus

How to safely & legally dispose of surplus:

- Pesticide waste clean-up days – contact UNH Family, Home & Garden Center  
1-877-EXT-GROW
- NH Dept. of Ag. – Div. of Pesticide Control  
271-3550

# Disposing of Empty Containers

**NEVER REUSE!**

## Liquid Formulations

- A. Triple rinse
- B. Puncture top & bottom, crush flat
- C. Deposit in a landfill

## Dry Formulations

- A. Empty completely
- B. Open both ends to prevent reuse
- C. Deposit in a landfill

# Disposing of Empty Containers

*Read the label for specific instructions....  
federal & state laws govern disposal*

***Incineration*** – only at licensed landfills, high temp burns containers, reducing them to gases and solid ashes

***Burial*** – only in licensed landfills

***Read the label, Read the label, Read the label!!!***

# Record Keeping

Time of day and date

Crop sprayed

Pest

Equipment used

Pesticide used

Common name, trade name, formulation, EPA #'s

Total formulation added to tank

Amount of mixture used

Size of crop treated

*Additional comments:*

Weather data – for possible legal issues

Inventory of pesticides in storage area

Applicator's name

# Worker Protection Standards

# Workers & Handlers

- A worker is anyone who:
  - Is employed (self-employed) for any type of compensation
  - Is doing tasks including harvesting, weeding, or watering in agricultural crops
    - Including forestry and greenhouses
- Does not include crop advisors

- A handler is anyone who is employed for compensation and:

- Mixes, loads, transfers, or applies pesticides
- Handles opened containers of pesticides
- Flags
- Cleans, repairs, or adjusts equipment or parts that may contain pesticide residues
- Incorporates pesticides into soil after application
- Enters a greenhouse before inhalation exposure level on product label has been reached
- Removes tarps used in soil fumigation
- Serves as a crop advisor
  - During application
  - During REI
  - Greenhouse prior to inhalation exposure level is reached
- Disposes of pesticides or pesticide containers

# What Is Required

- Information at central location
  - EPA approved WPS safety Poster
  - Name, address & phone number of nearest emergency medical facility
  - Info on pesticide applications (pre – 30 days pre application)
    - Product name, EPA Reg. No., active ingredients
    - Location and description of treated area
    - Time and date of application
    - REI



# You Must

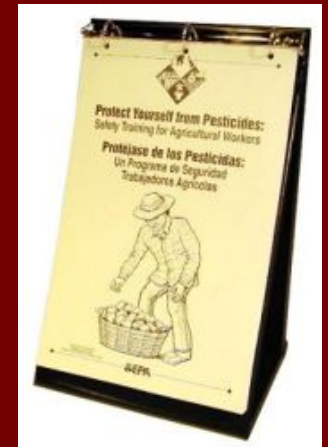
- Tell workers where info is posted and allow access
- Tell workers if emergency facility changes and post those changes
- Keep all posted information clear and legible

# You Must Provide Safety Training

- Train handlers and workers before they begin work and at least once every 5 years
  - Exception – if they possess a valid, EPA approved training card
- I suggest you train all workers every year to make sure they value their safety and its value to you

# WPS Training

- Use written and/or audiovisual for training
  - EPA WPS handler training materials for training handlers
  - EPA WPS worker training materials for training workers
- Have a certified applicator conduct training
  - Must be understandable to employees
  - Use easy to understand terms
  - Encourage and respond to questions



## ■ Please Note:

- You are required to provide some training to any worker hired within 30 days after an application of any pesticide and provide training before the 6<sup>th</sup> day of work
  - Exception – handlers must be trained before they do any work with pesticides
- You might just as well train them as soon as they are hired

# Decontamination Supplies

- Must be assessable
  - Within ¼ mile of all workers and handlers
- Basic supplies
  - Enough water for routine & emergency whole body washing and eye flushing
    - Water should be safe for drinking (potable)
  - Plenty of soap and single use towels
  - A clean coverall

- Provide handlers these same supplies where PPE (personal protective equipment) is removed at the end of a task
- Provide these same supplies at each mixing and loading site
- Make at least 1 pint of eye-flush water immediately available to each handler
- Supplies for workers must be outside area to be treated or under an REI
  - For handlers, place in enclosed containers within areas being treated



# Employer Information Exchange

- Commercial handler employers must be sure operator of site is aware of:
  - Location and description of area to be treated
  - Time and date of application
  - Product name, EPA Reg. No., active ingredients, REI
  - Whether the label requires both oral warnings and posting
  - All other safety requirements on label for workers or other people

- The operator of the site (farm, greenhouse, etc) must make sure commercial applicator hired is aware of:
  - Specific location and description of all areas to be treated
  - Specific location and description of all areas where an REI will be in effect while there
  - Restrictions on entering those areas

# Emergency Assistance

- When any handler or worker may have been poisoned or injured by pesticides, you must:
  - Promptly make transportation to an appropriate medical facility available
  - Promptly provide the victim and medical personal:
    - Product name, EPA Reg. No., active ingredients
    - All first aid and medical information from the label
    - Description of how the pesticide was used
    - Information about the victim's exposure

# Restrictions During Application

- In areas being treated, allow only properly trained and equipped handlers to enter
- Keep nursery workers at least 100 ft away
- Allow only handlers to be in a greenhouse
  - During a pesticide application
  - Until labeling-listed air concentration is met, or if none specified, not until after 2 hours of ventilation

# Restricted Entry Intervals (REIs)

Do not allow workers to re-enter a treated area during any REI

# Notice About Application

- Orally warn workers and post treated areas if label requires it
- Otherwise, either post or orally warn workers
  - Tell workers which method you will be using
- Post all greenhouse applications

# Posted Warning Signs

- Post legible, 14" x 16" WPS-design signs just before application
- Keep posted during the REI
- Remove before allowing any worker to re-enter
  - Regardless of REI, if sign is still up, no entry
- Post signs so they can be seen at all entrances from labor camps

**DANGER**   **PELIGRO**  
**PESTICIDES**   **PESTICIDAS**



**KEEP OUT**  
**NO ENTRE**

THIS PROPERTY TREATED WITH

on \_\_\_\_\_

and all persons are warned to stay out

until \_\_\_\_\_

# Oral Warnings

- Before each application, tell all workers present in a way they can understand
  - Location and description of area to be treated
  - REI and not to enter during the REI
- Workers who enter the establishment after application starts must receive the same warning at the start of their work period

# Additional Duties of Handler Employers

# Application Restrictions and Monitoring

- Do not allow handlers to apply a pesticide so that it directly or indirectly contacts anyone except properly trained and equipped (PPE) handlers
- If skull & crossbones on label, sight or voice contact at least every 2 hours
- Constant contact in greenhouse doing fumigant related tasks

# Specific Instructions for Handlers

- Inform all handlers of all label instructions for safe handling
- Keep pesticide labeling available for handlers
- Tell all handlers how to use handling equipment safely
- When commercial handlers will be on site, inform them of:
  - Areas on the farm where pesticides will be applied or where an REI will be in effect
  - Restrictions on entering those sites

- Provide handlers with the PPE on the label and be sure it is:
  - Clean and in operating condition
  - Worn and used correctly
  - Inspected before each day of use
  - Repaired or replaced as necessary
- Be sure respirators fit properly
- Take steps to avoid heat illness
- Provide handlers with a pesticide-free area for:
  - Storing personal clothing not in use
  - Putting on PPE at start of task
  - Taking off PPE at end of task
- Do not allow PPE to be worn or taken home

# Care of PPE

- Store and wash used PPE separately
- Clean before each day of use
- Dry before storing
- Store away from other clothing and pesticides

# Replacing Respirator Elements

## ■ Replace dust/mist filters

- When breathing becomes difficult
- When filter is damaged or torn
- When respirator label or pesticide label requires
- If no instruction, at the end of the day

## ■ Replace vapor cartridges/canisters

- When odor/taste/irritation is noticed
- When respirator label or pesticide label requires
- If no instruction, at the end of the day

# Disposal of PPE

- Discard coveralls and any other absorbent materials that are heavily contaminated with undiluted pesticide having a Danger or Warning signal word
- Follow fed, state, local laws when disposing of PPE that cannot be cleaned correctly
- Instructions for people who clean PPE
  - Inform them:
    - That PPE may be contaminated
    - Of the potentially harmful effects of exposure
    - How to protect themselves when handling PPE
    - How to clean correctly

# Liability Issues

# Almost All Pesticides Are Considered Hazardous

- Typical claims include:
  - Non performance
  - Misapplication
  - Crop injury
  - Property damage
  - Contamination of non-target areas

# Drift Is a Major Issue

- May cause environmental damage or crop damage
  - Drift onto organic crops is an issue also
- In general, courts have held both the customer and the commercial applicator liable

# Claims of Injury to the Target Site

- Can be claims of injury or claims that the product didn't work
  - Can involve dealer, manufacturer, and/or applicator
  - Party determined to be at fault must assume blame and pay damages
  - Only if applicator follows label exactly will manufacturer be liable

# Personal Injury

- In legal terms, pesticide application is considered an '**ultra-hazardous**' activity
  - The applicator is liable for any injury to a person from the pesticide
  - Injured person can recover damages without showing negligence
    - He must only show that he was not negligent and did not assume the risk of the application

# Wrong Site

- Application to the wrong site can cause serious problems
  - Pushing residues on crop above tolerance
  - Damage to the crop
  - Grower wish that the area be untreated
    - A special concern for organic growers
- Defense is difficult – key is prevention
  - Check and recheck addresses, site locations, and all landmarks before you apply (driveway!)

# Bees

- Honey bees are a critical element in crop production
  - They are insects...
  - Applicator can be held liable if drift from an application of pesticide kills bees in hive
- Bee considerate...
  - Know where hives are located
  - Notify beekeepers when you are going to spray

# Attractive Nuisance

- Generally involve kids being attracted to the ground equipment
  - Goodbane example
  - Owner +/- or applicator liable even if children are trespassing
- Do not leave contaminated equipment, containers, etc where children can access them

# Noise

- Claims will be that property is less valuable because of the noise you generate
  - Reasonable noise is not legally a nuisance even if it is irritating
- NH Right to Farm

# Cross Contamination

- It is common
  - May result from an error in mixing
    - Paraquat/parathion example
    - Miticide/rooting hormone example
  - May result from vaporization of an herbicide such as 2,4-D and adsorption to other pesticides stored nearby
  - Manufacturer may make an error
    - Oil – S&L example
    - Hydraulic oil example
- Keep containers, etc for lab tests
  - Tip: write the location and date of application on the label of each pesticide container

# If Your Are Involved...

## ■ Never admit liability

- Offer to look into the matter immediately
- Be sure you have detailed records
  - Londonderry example
  - Need more than what used where
    - Temp
    - Wind speed and direction
    - Equipment used

- Save the container that was used on the job
- Notify your insurance carrier immediately
- If a chemical company is involved, notify them as well

# Should You Have Insurance?

It is just common sense to carry protection

# Public Relations

- Always be courteous
- Listen to the question
  - Expressing genuine concern is important
  - Only answer if you know the answer...
  - Collect information
- Be prepared
  - Keep accurate records
  - Know what you are applying and possible effects
- Be prompt

# Accidents will happen

Be prepared, keep good records,  
and if an accident does occur,

Keep Calm