



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 (o)

- 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 p 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 6th 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 personnel:
 - 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



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
