News from the Vermont Agency of Agriculture, Food & Markets

Safe Transportation of Pesticides and Spill Cleanup

During the course of our duties as pesticide applicators, almost all of us at one time or another will need to transport pesticides in a vehicle. Whether we have just purchased a container of the concentrated formulation from a dealer, or we are driving a spray truck or rig filled with the diluted mix to the site of application, we must be aware that there are risks associated with driving on roadways in general, and the stakes are even higher when we add substances that are potentially toxic to humans or animals, corrosive, or damaging to the environment if released.

Do you know who is responsible if an accident occurs while transporting pesticides? In most cases both the owner of the vehicle and the operator will be held responsible and they will need to deal with the consequences of the accident or spill.

Most of the recommendations in this article are common sense, but I am going to cover these important safety points since one cannot be too safe in this industry, and there is a lot at stake.

One of the most important aspects of safety is to be constantly mindful of what you are doing and what is going on around you so that if an

Continued →
emergency comes up, you are prepared to act and hopefully prevent a serious accident or spill from occurring. Knowing what to do if a spill or accident does occur is very important, and may mean the difference between a minor mishap and a major disaster.

Your vehicle

Pesticides should never be transported in the passenger compartment of a vehicle. The bed of a pick-up is good since it is well ventilated and separate from the driver and passengers, but since it is open and therefore not secure, then security must be considered when leaving the vehicle unattended. Containers must be secured to prevent them from falling or rolling around during transport, and consider what would happen during an accident. Where would the container, or its contents, end up? Inside a locked box in the bed of a pickup is a great solution if it is feasible. Also be sure to protect the containers from tears, punctures and impacts that could lead to damage to the container. Clear the bed of the truck of any nails, stones or other objects or tools with sharp edges that may puncture pesticide containers, causing them to leak.

For flatbed trucks, all of the same considerations as above, but also make sure the side and tail racks are in place, and tie-down rings or cleats are used to secure the load. Steel or lined beds are better than wood since they are easier to keep clean. Packing or shipping containers are useful since they can act as an extra layer of protection during transport and can also act as secondary containment. Using a synthetic liner or tarpaulin that covers the floor and sides of the cargo area can make for easier clean up of spilled materials.

If you must use a station wagon or utility or cargo van to transport pesticides, then be sure to ventilate the cargo and passenger compartment well to prevent any pesticide vapors from overcoming the occupants. Also keep the pesticide containers far from the passengers, and provide some sort of secondary containment for the pesticide container, such as a plastic bin, bucket, or in the case of dry pesticides you could use plastic bags. This will help provide an added layer of protection in case there is a leak. Be sure to inspect pesticide containers before they are loaded in the vehicle to ensure that they are in good condition, have legible labels attached, the closures are tight and that the outside surfaces of the containers are pesticide free.

How the vehicle is maintained and driven is just as important as how or where pesticides are held in the vehicle when it comes to overall safety. Keep your vehicle in top running condition by following the manufacturer’s maintenance schedule at a minimum, and inspect cooling system, fuel system, brakes, belts, tires and all safety equipment frequently. The take home message here is an ounce of prevention is worth a pound of cure. Also speeding, tailgating, and un-necessary passing are bad habits whereas slower speeds, longer following distances and general caution are always on order when transporting hazardous materials like pesticides.

Other Considerations

Keep in mind the effect of the elements on pesticides being transported. Pesticides must be kept from weather extremes – keep them from freezing so that the containers don’t burst or the active ingredients are not deactivated. Avoid extreme heat for the same reasons, shade them from direct sun, and protect them from moisture, especially bags of the dry formulations such as dusts, powders, and granules that are usually contained in paper and will be ruined if they get wet.

Pesticides can cross contaminate other materials that they are stored or transported with. Separate the “plant killers” from the “plant protectants” so you don’t end up with herbicide residue in some product that is applied to desirable plants. Separate fertilizers and pesticides for the same reason, and always keep food, feed, seed and veterinary supplies away from all pesticides. Your lunch box needs to stay up front, with you.

All pesticide containers must have intact, legible labels during transport, and it is a good idea to have a copy of that label in a separate location as well as a copy of the product’s MSDS (Material Safety Data Sheet) on hand for you and first responders to refer to in case there is an accident or spill.

As I mentioned earlier, security of any pesticides being transported is very important. The owner and
the operator are responsible if unauthorized people gain access to pesticides, so be sure to keep them locked and secure when the vehicle is unattended. Children are very curious and will investigate containers and equipment that look interesting. Careless adults or vandals could expose themselves to pesticides or release pesticides in a manner that results in environmental contamination or injury to other people. The owner of the vehicle and the operator will be held responsible for poisonings and/or illegal contamination.

When a Spill Does Occur

When a spill does occur, be sure to call for emergency assistance if needed and protect yourself first. Control the flow of material, shut off the source and contain the spread of the spill. Then notify the Department of Public Safety HAZMAT Team at 1-800-641-5005 or the Vermont Agency of Agriculture at 802-828-2431. Do not leave the spill site unattended until clean up is complete since you are responsible for preventing injury to others that may contact the spilled materials.

Emergency Spill Kit

An Emergency Spill Kit is an important item to have when transporting pesticides. Having this at your finger tips when a spill occurs will save you alot of stress and aggravation since the essential tools will be there for you. This kit should include:

- Absorbent materials, spill pads, socks and pillows
- Sweeping compound
- Broom, dust pan
- Shovel
- Plastic disposal bags and ties
- 1 roll caution tape
- Blank tags or labels and a permanent marker
- PPE (Personal Protective Equipment) as needed for the pesticides being transported:
  - Tyvek suit
  - Goggles/face shield
  - Nitrile gloves
  - Boots
  - Respirator as needed

Your absorbent materials can consist of sand or other sweeping compounds available commercially, as well as absorbent mats or pads, socks, booms or pillows. All these different shapes serve different purposes and one may work better than another depending on the situation, so think about the form of the pesticides you transport so you can best match your clean up materials to them. Sawdust has been recommended in the past, but this material could react violently with any pesticide that is considered a strong oxidizer, causing a fire or explosion and is therefore no longer recommended.

The broom and dustpan are obviously for picking up granules or any of the powder or sand-like pesticides or absorbent materials. Be sure to clean these well after use. The shovel can also be used for picking up the absorbent compounds, but I feel it is important to have on hand if you ever find yourself needing to dig a ditch or trench to protect a sensitive site, like surface water, in the event of a spill. Shovels can also be used to build a berm for containing or deflecting sheet flow of spills on the ground. Quick thinking and a strong back can prevent a lot of environmental damage in some situations.

The bags and ties are for containing the contaminated spill cleanup materials. It is a good idea to also have buckets or barrels on hand for larger volumes since plastic bags may tear if overfilled. The labels and marker are for labeling these bags and other containers so people are aware of the hazardous material inside, allowing for proper handling and disposal.

The caution tape is for marking off the area where a spill has occurred to ensure that people do not inadvertently expose themselves to any hazardous materials there.

The PPE listed on the label needs to be worn when cleaning up a pesticide spill. Keep in mind you may be dealing with the concentrated formulation rather than the usual diluted spray mixture that you are accustomed to handling, and therefore the PPE listed on the label for use during mixing and loading is the minimum that needs to be worn during spill cleanup.


See quiz on page 9 for a credit...
New Law Affecting Lawn Care Professionals

The official title of this new law is “No. 37. An act relating to the application of phosphorus fertilizer to nonagricultural turf.”

A full copy of this law can be found by searching on this website:

http://www.leg.state.vt.us/database/search/search.cfm

This law takes effect January 1, 2012.

A portion of this act concerns lawn care professionals in that it regulates the application of turf fertilizer intended for commercial or residential use. The act prohibits the application to turf a fertilizer with a phosphate content of greater than 0.67 percent by weight. In other words, the middle number on the fertilizer bag must be zero (0). The only times a person may apply phosphorus fertilizer to turf is when there is a soil test showing that the lawn is deficient in phosphorus, or when fertilizer is labeled as starter fertilizer intended for application to turf in the first season when grass is being established.

The act also prohibits the application of any fertilizer to an impervious surface, so when any of those granules end up on a sidewalk or driveway, they must be swept back onto the turf immediately following the application. Also in this act, no fertilizer can be applied to turf before April 1 or after October 15 in any calendar year. The application of fertilizer to turf within 25 feet of a water of the state is prohibited as well.

So here is a summary of the law’s requirements that affect lawn care professionals:

- Use no-phosphorus fertilizer unless you have a soil test showing that P is deficient, or you are starting a new lawn.

- Application of turf fertilizer to impervious surfaces is prohibited. In other words, any fertilizer that gets on a sidewalk, driveway or other pavement must be swept up.

- You may not fertilize turf before April 1st or after October 15th in any calendar year.

- You may not apply turf fertilizer within 25’ of surface water.

Golf courses are exempt from this new law since they are regulated through their turf management plan as part of their golf course permit.

Maneb Tolerances are Expiring

A rule that was published in the Federal Register proposed the immediate revocation of existing maneb tolerances (40 CFR 180.110). Based on comments the EPA received, the maneb tolerances will remain in place until December 31, 2012. A pesticide tolerance is the amount of pesticide residue allowed by regulatory agencies to remain in or on a harvested crop, and a tolerance must be in place for a product containing that ingredient to be used on an agricultural commodity.

A final rule was published on July 12, 2011 making this decision final.

All growers that have existing stocks of maneb products intended for use on Agricultural commodities must use all of their stocks by December 31, 2012.

Here are the products currently registered for use in Vermont that contain the active ingredient maneb:

Product Name – Manufacturer - EPA Reg #

- Hi-Yield Maneb Garden Fungicide - Voluntary Purchasing Groups, Inc. - EPA Reg # 7401-303
- Maneb 75DF Dry Flowable Fungicide - United Phosphorus, Inc. - EPA Reg # 7506-186
- Maneb 80WP Fungicide - United Phosphorus, Inc. - EPA Reg # 7506-177
- Manex Fungicide - E I Dupont de Nemours And Company - EPA Reg # 352-655
EPA Pesticide Container Rules Take Effect

For Registrants, Retailers, Distributors, Commercial Applicators, Custom Blenders, and Pesticide Users

Purpose of the Rule
EPA published a final rule called the Pesticide Container and Containment (PCC) rule in August 2006 and made minor amendments to the rule in October 2008. The container portion of this rule took effect August 16, 2011.

The points below are key elements but do not cover every aspect and detail of the PCC rule. Refer to the final regulations for full details.

Key Refillable Container and Repackaging Requirements

Who must comply
If you are an independent refiller (repackage a pesticide and are not the registrant), you must comply with the requirements for stationary tanks and repackaging. Also, you are indirectly subject to the requirements for portable refillable containers. If you are a pesticide registrant, you must comply with the requirements for stationary tanks, portable refillable containers and repackaging.

Stationary Tanks
The following requirements apply to tanks with capacities of 500 gallons (liquids) or 4,000 pounds (dry) or greater and that are stationary (fixed or in place ≥ 30 days) and that are at the facilities of independent refillers (who repack a pesticide and are not the registrant). These tanks must:
- Be marked with a serial number or other identifying code
- Have sufficient strength and durability
- Have vents that limit evaporation
- Have a lockable inlet/outlet valve
- Not have external sight gauges
- Be in secondary containment (if it holds an agricultural pesticide)
- Be anchored or elevated to prevent flotation (if it holds an agricultural pesticide)

Portable Refillable Containers
Registrants are responsible for ensuring that portable refillable containers (minibulks, totes, shuttles, IBCs, etc.):
- Meet certain DOT design, construction, & marking requirements
- Are marked with a serial number or other identifying code
- Have a one-way valve or tamper-evidence or both on all openings (other than the vent)

Repackaging
Any refiller (a retailer, distributor or registrant) and registrants are subject to the repackaging requirements, which include:
- Must have a written contract between the registrant and an independent refiller
- Both the registrant and refiller are responsible for product integrity
- There are no regulatory limits on the size of refillable containers (Registrants might establish size limits in their contracts)
- Registrants must develop and provide refillers with: (1) a procedure to clean refillable containers, and (2) a description of acceptable containers that meet the requirements for stationary tanks and portable refillable containers. (Refillers must have these documents on file)
- When repackaging, a refiller must:
  o Identify the previous pesticide
  o Visually inspect to see if container is safe to use and has the required markings and openings
  o Clean the container unless the tamper evident device and/or one-way valve are intact and the container is being refilled with the same product (or the new product meets other very limited circumstances)
  o Repackage into a container identified in the registrant’s description of acceptable containers
  o Ensure that the product is properly labeled and includes his EPA establishment number and the net contents
  o Keep records on the product, date and container for each refill
Key Labeling Requirements

Who must comply

- Registrants must incorporate the new language onto their labels for pesticides that are released for shipment after August 16, 2010
- Pesticide users must follow the new container management instructions as soon as they are on the labels

New Label Statements

Labels (or containers) of nonrefillable containers will have:
- “Nonrefillable container” statement
- A “do not reuse” statement
- Recycling or reconditioning instructions
- A lot number identifying the batch
- More detailed rinsing instructions for dilutable products in rigid containers, except for household products

Labels (or containers) of refillable containers will have:
- A “refillable container” statement, and
- Instructions for cleaning the container before it is recycled or disposed of (not before it is refilled)

For More Information

Although the regulations (including the amendments) are final, EPA will be posting updated guidance and additional useful information to the PCC web site. For the complete rule or for additional information go to:

www.epa.gov/pesticides/regulating/containers.htm

* Taken from the US Environmental Protection Agency (EPA) Brochure titled “A Snapshot of the EPA Pesticide Container and Containment Rule”, EPA-735L09001, December 2009.

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News from UVM Extension

Plan Today for Tomorrow’s Flood - Keeping Pesticide Storage Facilities Safe

Ann Hazelrigg, Pesticide Safety Education Program

We are all too familiar with the destruction caused by Tropical Storm Irene this past fall. The storm was responsible for substantial losses of Vermont homes, field and vegetable crops, invaluable topsoil, potential income and morale. As a result of the flooding, many potentially hazardous materials were swept into rivers to be deposited on fields and flood plains farther downstream. With climate change, we may see more severe weather events and flooding in years to come. Take time now to assess your pesticide, fertilizer and fuel storage facilities and plan for tomorrow’s flood.

Many pesticide applicators may overlook the potential complications that can arise if containers of toxic materials are exposed to high winds or flood waters. Fertilizers, fuels, oil, pesticides and other chemicals on farms, golf courses, garden centers, farm supply stores, nurseries and greenhouses can pose a potential hazard to the environment and to public and animal health during severe weather events. Containers can be punctured and leak and drums, bags, and other containers can be swept away.

Before the next storm, here are some helpful tips to help you prepare and minimize any storm damage to your property:

Develop a plan for dealing with disasters for your storage area and your business or home.

Chemicals should be stored away from your home and work area in a separate facility.

Storage facilities should not be located in a flood plain or exposed area where wind could easily damage a building.

Inspect trees for weak limbs that could fall on your storage unit.

Close all openings including vents, louvers or doors. The effective force of the wind is doubled when allowed inside a building.

Storage should be located downwind and away from sensitive areas such as homes, schools, streams,
ponds and animal facilities.
Choose a storage building design that can resist high winds and site the facility so that the area surrounding the building has proper drainage.
Keep a current and detailed paper inventory of your stored chemicals in 2 places. An inventory on a computer may not be accessible if power is out for any length of time.
Keep your chemical inventory to a minimum by purchasing only what you need for one season.
Consider contracting with a commercial applicator to do your pesticide application to eliminate on farm storage of pesticides and fertilizers.

Keep your insurance up to date to protect you from losses.
Learn about the weather to help you anticipate problems before they arrive. Use a good weather alert radio or use the web to access and monitor both national and local weather at http://weather.gov/.
Store chemicals on shelving units anchored to the floor to prevent them from tipping over from wind or moving if water enters the building.
Let local authorities know where your chemical storage unit is located.
Mark your pesticide and chemical storage unit well with visible signs.

After the storm:
Check the storage unit for any water or wind damage as soon as possible.
Following a severe storm, keep unauthorized people away from the chemical storage unit and adjacent areas. Post the area to indicate that potentially hazardous chemicals are present.
Check any pastures or animal feeding areas before turning animals loose after a storm.
When entering a storm damaged facility, wear personal protective equipment (PPE). Be alert for any signs or symptoms of pesticide poisoning, i.e. nausea, headaches, difficulty in breathing, pinpoint pupils or convulsions. Seek medical attention immediately if poisoning is suspected.

Look for any broken, punctured or damaged pesticide or fertilizer containers. Manage any spills by controlling actively spilling materials by standing containers upright, plugging holes, etc.

To report a Pesticide Spill call the Vermont Agency of Agriculture at 802-828-2431. To report a Hazardous Materials Spill call the HAZMAT HOTLINE at 1-800-641-5005.

Contain spilled chemicals by installing absorbent barriers, collect spilled product and absorbent materials in sturdy containers and store them in an area where further disturbance will be minimal until they can be disposed of properly.
Refasten any pesticide labels that have become loose during flooding. Check each container for hidden damage.

Information adapted from the UMass Extension website (John Bartok)

Storm-Damaged Agrichemical Facilities. University of Florida. Dean, T. and Nesheim, N.
http://edis.ifas.ufl.edu/pi007

Protecting Your Chemical Storage Area from Storms and Floods. Virginia Tech University.
http://vtpp.ext.vt.edu/pesticide-safety-education-program/protecting-your-chemical-storage-area-from-storms-and-floods

See the quiz on page 11 for a credit.
Update on DuPont’s Imprelis Herbicide

As you may or may not already know, DuPont’s Imprelis herbicide labeled for use on turf has in some cases caused unintentional damage to, or death of, ornamental trees in or near treated areas. In case you purchased and/or used Imprelis herbicide this past year, I have included the following letter for your information. You should have already been contacted directly by your product dealer or distributor about returning all unused Imprelis, but if you have not been contacted and have stocks of Imprelis, please contact your pesticide dealer concerning the return of your product.

October 17, 2011

Dear Lawn Care Professionals and Golf Course Superintendents,

I am writing to update you about the product return and refund program for DuPont™ Imprelis® herbicide. We have written to your distributor, who will be coordinating with you to ensure that all remaining full and partially full bottles of Imprelis® are returned. Once your distributor contacts you regarding this product return and refund program, please return all Imprelis® product to them within 10 business days.

After you return your remaining Imprelis® to your distributor, you will be given either a refund or credits, depending on your distributor’s policy. The EPA approved disposition plan suggests that you maintain records associated with Imprelis®, including but not limited to: 1) quantities used and returned, including product lot numbers 2) application records, and 3) purchase records.

If you have Imprelis® product remaining in mixes or spray tanks, please contact DuPont at 800-463-8039 for further guidance.

The following products are included in the program:
- Imprelis® herbicide (D14616296) - 4.5 fl oz bottle
- Imprelis® herbicide (D14563533) - 1.0 gallon bottle
- Imprelis® herbicide (D14544159) - 2.5 gallon bottle

We regret any damage that the use of Imprelis® herbicide may have caused to trees, and we remain committed to working with you and all of our customers to promptly and fairly resolve problems associated with the use of this product.

We appreciate your help in this matter. Please let us know if you have any questions.

Sincerely,

Michael McDermott
Global Business Leader
DuPont Professional Products

DuPont Professional Products
4417 Lancaster Pike
Chesnut Run Plaza 705
Wilmington, DE 19880-0705
**Home Study Quiz 1 – Safe Transportation of Pesticides and Spill Cleanup**

The following questions refer to the article on pages 1-3. Fill out the information on the back of this completed quiz and mail it to the Vermont Agency of Agriculture to receive (1) one pesticide recertification credit.

**Circle the best answer:**

1. Who is responsible if an accident occurs while pesticides are being transported?
   
   A. the insurance company  
   B. the vehicle owner and/or operator  
   C. the vehicle inspector

2. What is the best location in or on a vehicle for transporting pesticide containers?
   
   A. the locked trunk of a car  
   B. the bed of a pick-up, in a lock-box  
   C. the passenger compartment with doors locked

3. What is the reason for inspecting pesticide containers before they are loaded into a vehicle?
   
   A. to ensure that they are in good condition, are labeled, have tight closures and are pesticide free on the outside  
   B. to ensure that the EPA registration number, pesticide name, and EPA establishment number are correct  
   C. to make sure you have enough for the job

4. What could happen if containers of pesticide are not protected from the elements?
   
   A. it might get stolen  
   B. it might fall  
   C. it might burst

5. What is the reason for keeping “plant protectants” and “plant killers” separated?
   
   A. they could deactivate each other  
   B. they could cross contaminate each other  
   C. they could decontaminate each other

6. Other than the actual pesticide label, what else should you have in the vehicle with you while transporting pesticides?
   
   A. the invoice to the customer  
   B. the receipt from the dealer  
   C. the material safety data sheet

7. Why does the PPE listed on the label need to be worn when cleaning up spilled pesticide?
   
   A. so you don’t get physically injured  
   B. the potential for exposure to pesticide is great  
   C. just to make you look silly
The following information is required. Mail the completed quiz to the Vermont Agency of Agriculture to receive one (1) pesticide recertification credit.

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OPTIONAL: Please include your E-MAIL ADDRESS if you haven’t already given it to me.

Mail to:

Vermont Agency of Agriculture, Food & Markets  
Attn: Matthew Wood  
116 State Street  
Montpelier, VT 05620-2901
Home Study Quiz 2 – Plan Today for Tomorrow’s Flood…

The following questions refer to the article on page 6. Fill out the information on the back of this completed quiz and mail it to the Vermont Agency of Agriculture to receive (1) one pesticide recertification credit.

1. What precautions should you take when entering a damaged pesticide storage facility after a severe storm?

2. Why is a chemical inventory important?

3. What site considerations should be considered before building/ereciting a pesticide storage facility?

4. Why should all openings into the facility be closed before a severe storm?

5. How should chemicals be stored?

6. What are some common symptoms of pesticide poisoning?

7. List 3 things you would do if you walked into your storage facility and you saw liquid pesticides spilling out on the floor?

8. Even though you may get a better price, why should you not stock extra pesticides on a year to year basis?

9. Why should animals not be let out to pasture immediately after fields are flooded?

10. What should you do immediately after danger from the storm has passed?
The following information is required. Mail the completed quiz to the Vermont Agency of Agriculture to receive one (1) pesticide recertification credit.

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OPTIONAL: Please include your E-MAIL ADDRESS if you haven’t already given it to me.