

EMERGENCY RESPONSE

Accidents are unplanned and can even happen when proper care is taken. Spills, equipment failures, or fires can occur when handling, moving, storing, or applying pesticides. Serious harm to human health, livestock, wildlife, or the environment can result.

Accidents are often sudden and without warning. Correct and timely response to an accident with pesticides is crucial. This is often the key to reducing the extent of injury or damage. Steps can be taken to prepare a response to accidents or emergencies. These include:

- Knowing all areas of risk
- Knowing how to respond to different types of accidents
- Taking necessary steps to reduce risk
- Making and using emergency response plans and kits

Learning Objectives

Completing this chapter will help you to:

- Know why pesticide spills are a hazard.
- Know how to prepare and safely respond to pesticide spills.
- Know the importance of a well-equipped decontamination kit and what it should contain.
- Understand why fires involving pesticides are hazards and know how to prepare for, respond to, and prevent them.

Learning Objectives, cont'd.

- Know how to reduce the theft of pesticides and what to do if product is stolen.
- Know first aid steps.
- Know what items should be in an emergency response kit and their use.
- Know the function of an Emergency Response Plan and which emergencies to prepare for.
- Understand why any accident should be reviewed.
- Know the kinds of emergencies that can occur.

Pesticide Spills

Pesticide spills can poison people, animals, or plants. A spill can also directly or indirectly contaminate soil, surface water, ground water, or food/feed. The clean up costs from a pesticide spill can be very high. Spill prevention and a plan to respond are a must. Certain actions can decrease the chance of a pesticide spill. Planning and preparing a proper response for minor and major spills can reduce damage.

Preparing for an Accidental Pesticide Spill

Pesticide spills are never planned. The risk of an accidental spill is always present when a pesticide is being handled. Key preventative actions can reduce the damage, and the cost of cleanup can be reduced. A plan of action will better prepare pesticide applicators to respond to a spill. The plan should include the following:

- Know the hazards of any pesticide used and what to do should a spill occur.

- Have knowledge of provincial laws on proper spill response, notification, and disposal.
- Keep emergency phone numbers handy. These should include:
 - The local environmental emergencies number
 - Police
 - Fire department
 - Ambulance
 - Poison control centre
 - Doctor
 - Canutec¹ (613-996-6666)
- Have near the telephone the label or MSDS information on 24-hr emergency phone numbers and procedures for first aid, cleanup, decontamination, or disposal.
- Have proper personal protective equipment (PPE) and cleanup equipment in a spill response kit.

Human Safety Concerns

Human safety is the most important concern when a spill occurs. Safety concerns must extend to those who might be contaminated directly, and indirectly during the containment and cleanup process. Following basic guidelines will reduce the hazard to human health when responding to a pesticide spill. Basic safety guidelines are as follows:

- Always wear proper PPE before going into a contaminated area or handling someone who has been exposed to a spilled pesticide.
- Evacuate the spill area and remove all contaminated clothing. Wash contaminated skin with soap and water to prevent further exposure. Provide first aid if needed, and get medical help at once.
- Control access to the spill area by keeping people and animals away.

¹ Canutec can provide information for major transportation spills.

- Cover liquid spills with absorbent material. Keep them from moving off site. Check pesticide MSDSs for instructions on containment including the use of earth (or other materials) to contain a spill and prevent it from entering storm drains, wells, water systems, and waterways.
- Do not smoke, eat, or drink during cleanup. Wash thoroughly after cleanup activity.
- Open all windows and doors. Turn on the electric ventilation system if the spill is in a confined space or storage area.

Certain pesticides are very flammable. Only turn on an electric ventilation system if it is explosion-proof.

Spill Response Procedures

Risk to humans can be reduced by a quick and orderly response to a spill. This can also reduce damage to the environment by minimizing the area of contamination. This will reduce the cost of cleanup and decontamination. Always respond to a spill in this order:

1. Put on proper PPE before going into a contaminated area or handling someone exposed to a spilled pesticide.
2. Attend to any victims.
3. Try to contain or reduce the spill.
4. Clean up the spill.
5. Decontaminate the site.

Clean up pesticides only after putting on the proper PPE and attending to any victims.

Sometimes the process for dealing with a pesticide spill is given on the pesticide label or MSDS. If this is not provided, use the following as a guide for cleaning up small and large spills.

Cleaning up a Small Spill

Less than 20 L or 20 kg of concentrated product or less than 200 L of pesticide mix

These steps should be taken when cleaning up a small amount of spilled liquid or dry pesticide:

1. Contain or reduce further spillage.
2. Put down absorbent material such as activated charcoal, peat moss or 'kitty litter'. Commercial absorbents for soaking up liquids are also available. Dampen a dry substance very slightly with a little water.
3. Sweep or shovel contaminated soil and absorbent material into a container (drum) lined with a heavy-duty plastic bag.
4. Seal and label the container. Record on the container the pesticide's product name, the P.C.P. Act Registration Number, approximate amount of pesticide, and date of accident.
5. Contact a provincial pesticide regulatory body for proper disposal procedures.
6. Decontaminate the spill area (as will be discussed later) or consult the product MSDS or manufacturer for directions to neutralize any residues that remain.

Never use large amounts of water to wash down a pesticide spill. The contaminated water may move off site and contaminate a wider area, nearby surface water or groundwater.

Clean up spilled pesticide only after putting on the proper PPE and attending to any victims.

Cleanup of a Large Spill

More than 20 L or 20 kg of concentrated product or more than 200 L of pesticide mix)

A spill of more than 20 L or 20 kg of concentrated pesticide can occur if containers are damaged. This can result from a vehicle accident while transporting pesticide or moving a pesticide in storage. A spill of more than 200L of pesticide mix can also occur as the result of a malfunction or accident with the application equipment.

When cleaning up a large amount of spilled liquid or dry pesticide:

1. Contain large spills of liquid to a storage confinement area by building an earthen dam. This keeps pesticide from getting into water supplies and drainage systems. Keep the containment area small. Pump large spills into drums.
2. Put down absorbent material such as activated charcoal, peat moss or 'kitty litter'. Commercial absorbents for soaking up liquids are also available.
3. Sweep or shovel contaminated soil and absorbent material into a container lined with a heavy-duty plastic bag. The container should have a tight lid.
4. Seal and label the container. Record on the container the pesticide's product name, P.C.P. Act Registration Number, approximate amount of pesticide, and date of accident.
5. Arrange for disposal by a licensed, hazardous waste handling company.
6. If required, notify a provincial pesticide regulatory body of the spill and the steps taken to clean it up.
7. Decontaminate the spill area. Follow the required steps (as will be discussed later) or consult the product MSDS or manufacturer for directions to neutralize any remaining residues.

Contact a provincial pesticide regulatory body for help if a pesticide spill is likely to cause harm to the environment, affect the safety of the area, or damage property, livestock, or people.

Decontamination of the Spill Area

Spilled pesticide can be hard to remove if it has dried. In some cases, bleach or lime placed on the area after cleanup will help break down any pesticide that remains. Use only small amounts of bleach or lime, and only when they are called for on the pesticide label.

If a spill occurs on soil, remove any soil that appears contaminated. Depending on the pesticide, residue that remains in the soil may have to be neutralized. Consult a provincial pesticide regulatory body, the pesticide MSDS, or manufacturer to receive information on decontamination of pesticide-saturated soil.

Never wash down a pesticide spill with large amounts of water. The pesticide / water mix may leach into the soil and contaminate groundwater.

Decontamination of Cleanup Equipment and Personal Protective Equipment

Spilled pesticide and other contaminated materials must be safely placed in containers. Cleanup equipment, such as shovels, brooms, etc. must be washed and decontaminated. To decontaminate cleanup equipment:

1. Put on proper PPE.
2. Wash any shovels, brooms, and equipment used to clean up the spill. The wash water or residue should be added to the material in the drums if practical.
3. Wash any contaminated PPE before taking it off.
4. Remove clothing and equipment (See Chapter 5: Pesticide Safety). Always wear gloves when removing and washing PPE.

5. Gloves are the last piece of PPE to be removed. Wash gloves before taking them off.
6. Wash your hands and face with soap and water.

Personal Hygiene

Shower and change immediately if clothing becomes heavily contaminated during cleanup of a spilled pesticide. Do not wait to finish the cleanup.

After cleanup, wash your hands and face with warm soapy water. Do this before eating, drinking, smoking, or changing into regular clothing. Take a full shower as soon as possible.

If any person involved in the spill or cleanup begins to feel sick (e.g., nausea, headache, etc.), take him/her to the nearest hospital at once. Take along:

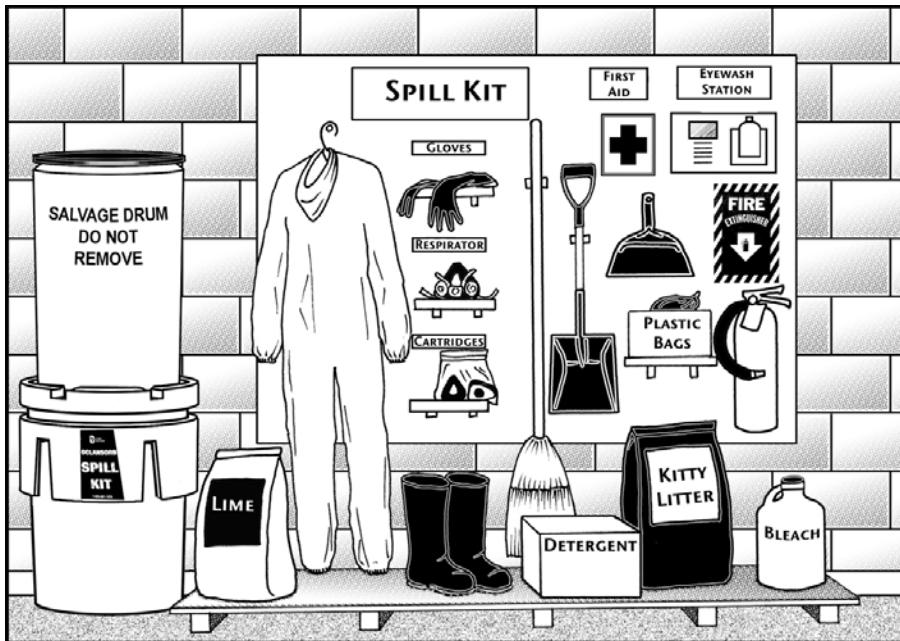
- A clean pesticide label (if possible)
- The PCP Act Registration Number (on the front panel of the label)
- All medical treatment information on the label or MSDS

Medical personnel can use the PCP Act Registration Number to get treatment information, if needed.

Spill Response Kit

A fully equipped spill response and decontamination kit should be kept on hand when storing, moving, or handling pesticides. Proper PPE, nearby in a spill response kit, will reduce the risk to human health. This also allows quick and safe containment and cleanup. Quick response to a pesticide spill can reduce contamination to soil, surface water, groundwater or the environment. The smaller the area contaminated, the lower the cost of cleanup. The spill response kit should be labelled, checked regularly, and stored in a safe place with easy access in case of an emergency.

APPLICATOR CORE



A spill response kit should contain:

- A box of heavy-duty detergent
- Sufficient absorbent material to clean up any size liquid spill
- Sodium hypochlorite (laundry bleach)
- Hydrated lime (do not mix bleach and lime)
- A square-mouthed aluminum shovel or spade
- Yard brooms
- Drums with tight-fitting lids
- Heavy plastic bags
- Cartridge type respirators (keep cartridges in a sealed bag)
- Safety goggles
- Unlined chemical resistant gloves and boots
- Coveralls

The most important step to take after a pesticide spill is to protect yourself. You are no help in an emergency if you become a victim of poisoning.

In Review

A pesticide spill can occur at any time and place. Those who handle or apply pesticides must be prepared to deal safely and quickly with small and large spills. A quick and safe response can reduce the extent of a spill and reduce risk to humans and the environment. A response plan for dealing with spills should be prepared. A fully equipped spill response kit should be positioned where spills might occur.

In case of a pesticide spill:

1. Protect yourself. Never enter an area where pesticides have been spilled without proper personal protective equipment.
2. Attend to any victims.
3. Contain the spill. Never flush the spill area with large amounts of water. This can move off-site and cause further environmental contamination.
4. Clean up the spill. Place all pesticide and contaminated material into a container with a sealed lid and the contents listed.
5. Contact the provincial pesticide regulatory body for safe disposal.
6. Decontaminate the site.

Pesticide Fires

Fires involving pesticides are extreme hazards. Some pesticides are flammable. Some are explosive. All pesticides are likely to produce highly toxic fumes when burned. These fumes may be harmful to people (including firefighters), animals, or plants. Runoff water from fighting a fire is likely to contain pesticide residue. This may contaminate soil, sewers, streams, lakes, wells, or other water sources.

Fire Prevention

Pesticides are hazardous materials. Many pest control products contain oil or highly flammable petroleum solvents. When pesticides are involved in a fire, damage can result from fumes, runoff water, or direct contact. Because of the potential harm of pesticide fires, steps should be taken to reduce or prevent them. Prevention is the cheapest way to reduce the potential risk and cost of a pesticide fire.

To prevent a pesticide fire, or reduce the effects if one occurs in a pesticide storage:

1. Store pesticides away from other buildings and homes.
2. Secure doors and windows to prevent unwanted access.
3. Ensure that the storage structure adheres to the National Fire Code, National Building Code, National Electrical Code, provincial laws, municipal by-laws, etc.
4. Post signs on all storage entrances to show that pesticides are present.
5. Install fire and smoke detectors in the storage area.
6. Do not use open flames for welding, burning, cutting, or heating in the pesticide storage site.
7. Keep a fire extinguisher near the storage area.
8. Inform the local fire department as to the exact location and estimated quantity of pesticide stored.

9. Keep a list of stored pesticides in an easy to reach location away from the storage area.
10. Keep emergency phone numbers handy.
11. Develop a plan in the event of a fire.

Developing a Contingency Action Plan

A plan of action is key in being prepared to deal with a fire. This can be quickly acted on once a fire is reported. A plan of action saves time and lives. This plan should be prepared in advance, rehearsed, and updated (at least yearly). A good plan should include the following:

1. Call the fire department at once. Have the number posted for quick response.
2. Make sure all workers are accounted for. The plan should give a location for all to meet. Firefighters will want to know if all are accounted for. This will allow them to know if they need to rescue, or just fight the fire.
3. Keep people and animals away and upwind. This will keep them from being exposed to toxic fumes, runoff, or explosions.
4. When firefighters arrive, tell them if all personnel are accounted for. Remind them that pesticides are stored in the building.
5. Tell firefighters what pesticides are involved.
6. Tell firefighters of any well or water source that may become contaminated.
7. Report any fire with pesticides to the provincial pesticide regulatory body.

In Review

A fire with pesticides can be sudden and unexpected. The fire and contamination may affect human health and the environment. This can also be expensive to clean up. The cheapest way to deal with pesticide fires is to prevent them. Those who handle or apply pesticides should know what fire hazards exist. They should do all they can to reduce the chance of a fire.

Fires will still occur. Applicators need to be ready to immediately respond with a good plan of action. This will save time, and reduce harm to humans and the environment.

Pesticide Theft and Vandalism

Keep pesticides secure and contained during transport and storage to reduce theft and vandalism. Theft can be costly. Vandalism can cause human or environmental contamination. A pesticide owner or applicator may be subject to legal action if human health or the environment is harmed by stolen pesticides. If pesticides are vandalized or stolen, call the police at once, so they can put it on record. Also, report the incident to the provincial pesticide regulatory body.

First Aid

First aid is the means to help stabilize a sick or injured person until medical help arrives. First aid can prevent further injury and save lives. First aid is only a first response. It cannot take the place of medical help. Always call for medical help right away.

A quick and proper response to a poisoning is crucial. To provide first aid, employers, workers and family members should know:

- Where to find a list of emergency phone numbers
- Signs and symptoms of poisoning for the pesticides being handled
- The first aid treatment for pesticide poisoning for the pesticides being handled
- Where the pesticide application is taking place and what time the applicator should return
- Where to find a first aid kit

First Aid Kit

An emergency first aid kit should be kept where it can be easily accessed. Kit contents should be based on:

- The number of people working on site
- The type of work
- The location of the work

Table 9-1 lists the contents of a first aid kit for responding to pesticide accidents or poisonings. This kit should be kept **near** an application or pesticide storage area.

Table 9-1: Contents of a first aid kit

<i>ITEM</i>	<i>PURPOSE</i>
Clean water	Drinking, washing skin, or flushing the eyes
Soap	Washing pesticide off skin
Chemical impermeable gloves	Protecting person administering first aid
Cup or glass	For drinking
Face mask with one way valve	Protecting person giving mouth to mouth resuscitation
Bandages	Preventing pesticides entering wounds
Blanket	Covering patient and minimizing the risk of shock
Emergency phone numbers	To get help
Paper towel	Cleaning
Plastic bag	Collecting vomit for later analysis by the medical personnel if required
Syrup of ipecac	Inducing vomiting. This is only to be administered upon instruction of a poison control centre or doctor, and only if the patient is alert
Activated charcoal	Absorbing pesticide in stomach. This is only to be administered upon instruction of a poison control centre or doctor, and only if the patient is alert

General Procedures for any Pesticide Poisoning

When handling patients who have been poisoned by pesticides:

1. Call a doctor or poison control centre if the patient is unconscious, heavily contaminated, or appears to have swallowed a pesticide.

2. Put on proper personal protective equipment and assess any hazards.
3. Remove the patient from any contamination. **(Note: ONLY move if spinal cord injury is not suspected.)**
4. Confirm that the patient is breathing. If not, give artificial respiration if you are trained to do so. Wear a facemask with a one-way valve to prevent pesticide exposure from the patient's mouth.
5. Cardiopulmonary resuscitation (CPR) may be needed if the victim has no pulse. **Administer CPR ONLY if you are trained to do so.**
6. Keep the patient quiet, warm, comfortable and reassured to minimize shock.
7. If the patient is conscious and breathing, place him/her on their side. The head should be lower than the rest of the body and turned to one side (in case of vomiting). This is the recovery position.
8. If the patient is not conscious, keep the chin pulled forward and head back to allow breathing. (An unconscious patient should never be transported flat on their back.)
9. Wait for medical help.

General First Aid

If the patient is having a seizure or convulsion, lay him/her down in a safe area. Do not try to restrain.

A person can be exposed to pesticides in four different ways:

1. Exposure to the Lungs (Respiratory Exposure)
2. Exposure to the Eyes (Ocular Exposure)
3. Exposure to the Skin (Dermal Exposure)
4. Exposure through Eating or Drinking (Oral Exposure)

Responses to respiratory exposure, ocular exposure, dermal exposure, and oral exposure are noted below.

Treatment for Respiratory Exposure

Pesticide vapours and fine droplets can be inhaled into the lungs. This can cause respiratory exposure. If this occurs, act quickly and:

1. Put on proper personal protective equipment. Assess any hazards.
2. Move the patient to fresh air. Loosen any tight clothing.
3. If qualified, apply first aid to treat the patient's symptoms until help arrives. Place a blanket beneath the patient's shoulder. Tilt the head back with chin forward to promote breathing.
4. Minimize the onset of shock by keeping the patient quiet and preventing chilling or overheating.
5. Call for medical assistance.

Treatment for Exposure to the Eyes (Ocular Exposure)

Pesticides may splash into the eyes during mixing and loading, or during application. It can then be quickly absorbed into the bloodstream and cause poisoning. Some pesticides are also very corrosive. These can cause short and long-term eye damage. Pesticide label information will provide a warning if the pesticide is corrosive. Always wear proper eye protection when handling or using pesticides.

Treat pesticide contamination of the eyes as follows:

1. Hold the eyelid open and flush with clean running water for 15 minutes or more.
2. Read and follow first aid instructions given on the pesticide label.
3. Call for medical help or take the patient to a hospital.

Treatment for Exposure to the Skin (Dermal Exposure)

The skin (particularly the hands) is the most likely site of pesticide exposure. This can occur at any point in the handling process. It can result from:

- Touching a contaminated container or application equipment
- A splash during mixing and loading
- Brushing against treated vegetation or surfaces during or after an application

In all cases, quick response is required to reduce toxic effects.

Treat pesticide contamination of the skin as follows:

1. Remove the patient's contaminated clothing and footwear at once.
2. Drench the patient's skin with water. Cold water is best. Hot water opens skin pores and increases pesticide absorption.
3. Call for medical help if there is extensive exposure or the patient becomes unconscious.
4. Wash the patient's skin and hair with soap and water. Clean under fingernails and toenails.
5. Give first aid as required until help arrives.

TREATMENT FOR CHEMICAL BURNS

Some pesticides are corrosive. They can cause chemical burns when they contact skin. Care must be taken when handling pesticides that are known or suspected to be corrosive.

Treat skin contamination with a corrosive pesticide as follows:

1. Have the patient enter a shower at once, if available. Remove all contaminated clothing.

2. If no shower is available, remove contaminated clothing and wash the skin with lots of cold running water.
3. Cover any burned area with a loose, wet, clean cloth. **Do not apply anything to the burned area.** Never use salves or ointments on a chemical burn.
4. Call for medical help and give first aid as required.

Treatment for Ingestion of Pesticides (Oral Exposure)

Poisoning due to the ingestion of pesticides often occurs when people store pesticides in something other than original pesticide containers (e.g., soda bottles, cans, coffee mugs, etc.). Another person may accidentally swallow the pesticide and poisoning can result. Quick action is required.

Treat oral ingestion (swallowing) of a pesticide as follows:

1. Call for medical help at once.
2. Read and follow first aid instruction given on the pesticide label.
3. Induce vomiting by giving the patient water and placing him/her in a sitting or standing position. Have him/her gently tickle the back of the throat with a finger or a blunt object.
4. Collect some of the vomitus for medical examination.
5. Provide first aid as required until help arrives.

Induce vomiting only if:

- The patient is alert
- The label tells you to do so
- Ordered by the poison control center or medical personnel

Do not induce vomiting if:

- The patient is unconscious
- The patient is having convulsions
- A corrosive pesticide was swallowed
- A petroleum-based pesticide was swallowed

Never give anything by mouth to an unconscious or drowsy patient.

Recording Medical Information

Knowledge of the pesticide involved in an actual or suspected pesticide poisoning can assist medical personnel in their diagnosis and treatment. In the case of a poisoning emergency, provide medical personnel with:

- The name of the pesticide(s) (or active ingredient)
- The PCP Act Registration Number (from the front panel of the pesticide label)
- The type and extent of exposure (ingestion, dermal, etc.)
- Symptoms observed and their sequence
- The length of exposure or amount of pesticide ingested
- The age and weight of the exposed patient
- The medical history of the exposed patient
- The first aid performed

Follow up to an Exposure

Once a patient has been exposed to a pesticide, he/she may become sensitive to other pesticides in the same chemical family. If so, a much milder second exposure may cause poisoning symptoms identical to or worse than the first. Anyone who has been poisoned by a pesticide should have a full medical assessment before resuming normal activities or work. This assessment should be done, even if there is a full recovery after first aid. Family members and other workers should watch the victim(s) for recurring poisoning symptoms.

First aid is not a substitute for professional medical treatment.

In Review

Pesticide poisonings often occur from accidental contact. The best way to reduce the chance of poisoning is to prevent the accident. Still, accidents will happen. Making and practicing plans of action will allow for quick, proper, and safe responses by rescuers.

When a pesticide poisoning occurs, those attending to the patient(s) must be kept safe. A rescue should not occur until all hazards have been assessed. Rescue personnel must put on proper personal protective equipment. Timely first aid can reduce the effects of a pesticide poisoning. Those handling or applying pesticides should know the symptoms of poisoning and first aid practices for the pesticides they are working with. The pesticide label is the most important source of information for first aid.

A first aid kit will allow treatment to be given while waiting for medical help to arrive. When medical help does arrive, they should be given all relevant details and the PCP Act Registration Number of the pesticide(s) involved.

Any pesticide exposure that results in poisoning symptoms should be reported to medical professionals.

Developing an Emergency Response Plan (ERP)

An accident can occur suddenly and without warning. Those who handle or apply pesticides must be prepared to respond to such events. Prepare by making an Emergency Response Plan (ERP). This can be quickly and effectively used if an emergency occurs. The ERP should give instructions to respond to and deal with all pesticide-related emergencies. These include fires, spills, and vandalism. The ERP should also be designed to prevent a simple emergency from turning into a major disaster. The ERP should contain steps to limit the harm to individuals, the community, and the environment.

The first step in making an Emergency Response Plan is to identify any emergency that can happen. The process of making an ERP may prevent some emergencies. People may spot and control hazards before they cause harm. Emergency Response Plans should prepare for:

- Accidents causing injury
- Gas and odour release
- Pesticide spills
- Fires or explosions
- Natural disasters (floods, ice storms)
- Vehicle transport accidents
- Threats (phone calls)

Ensure that the facility and emergency response services are equipped to handle the kinds of emergencies common to the storage, handling, and transport of pesticides. Make sure that all involved in the plan (including new workers) are aware of what is expected of them in carrying out the ERP. Practice with different emergency scenarios will help people come to know the plan. It is good to review the ERP before the start of each use season. Perform a complete update annually. Copies of the plan should be kept off site and available to emergency responders.

Summary

There is always a chance of an emergency when handling or applying pesticides. All who work with pesticides should be prepared to respond to poisonings, accidents, spills, fires, and theft.

There should be a plan with actions to take in case of an emergency. The plan should include information on what to do in case of poisoning or exposure. There should be ready access to safety equipment. Safety equipment should include personal protective equipment, fire extinguishers, and a spill response kit.

Put on the proper personal protective equipment before responding to an accident, and assess the area for danger.

Self-test Questions

Answers are located in Appendix A of this manual.

1. List 7 phone numbers that should be available for quick response to an emergency.

_____	_____
_____	_____
_____	_____

2. The first action when cleaning up a pesticide spill is to contain the spilled pesticide. **True or False?**
3. What volume of liquid is considered a small spill?

4. Why is it wrong to wash down a spill with large amounts of water?

5. What should happen if a person involved in the spill or its cleanup begins to feel sick (e.g., nausea, headache, etc.)?

APPLICATOR CORE

6. Why are fires involving pesticides considered to be extremely hazardous?

7. Fire prevention is important. List 11 actions that can be taken to prevent or reduce the chance of a fire involving pesticides.

8. First aid is meant to stabilize a sick or injured person until medical help arrives. True or False?

9. What is the treatment when the eyes are exposed to a pesticide?

10. Which of the following is False?

- a. Do not induce vomiting unless told to do so on the pesticide label or on instruction from the poison control center or other medical personnel. Only do it if the patient is alert.
- b. Small amounts of water may be given to an unconscious or drowsy patient.

- c. Do not induce vomiting if the patient is unconscious or having convulsions.
- d. Do not induce vomiting if a corrosive material or petroleum-based product was swallowed.

11. Having an emergency response plan (ERP) allows for quick and proper action when pesticides are involved. Why is it important to act quickly?

12. List 7 emergencies for which an ERP should be prepared.
