

Pesticide Safety Program



Environmental Health, Safety and Risk Management Department

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Thank you to Texas State University for the use of their pesticide chemical safety program.

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I. Introduction

Stephen F. Austin State University's (SFA) Pesticide Safety Program applies to licensed pesticide handlers working with restricted-use pesticides on SFA property. This program is designed to ensure these employees are properly trained and aware of the hazards they may be exposed to while working with pesticides on the university grounds. As well as instructions to reduce take-home exposure from pesticides on work clothing. SFA's Pesticide Safety Program also fulfills the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) regulating pesticide safety and worker protection standards through the U.S. Environmental Protection Agency (EPA).

Pesticides use chemicals to eliminate pests and protect crops. The four most common pesticides are insecticides to control insects, herbicides to control weeds, fungicides to control plant diseases, and rodenticides/pesticides to control other pests such as rodents and birds. Commercial pesticides are poisonous and can be extremely dangerous to humans and the environment. Before applying commercial pesticides always use caution and consider your safety, the safety of others, and the safety of the environment.

The EPA's Worker Protection Standard (Title 40 CFR part 170) targets the reduction of risk from pesticide poisoning and injury among agricultural workers and pesticide handlers. The standard requires employers to provide personal protection equipment (PPE) to workers from potential exposure, provide training on pesticide safety, and mitigate any pesticide exposures that may occur.

All SFA employees handling and applying restricted-use and regulated pesticides on SFA property are required to complete a mandatory annual pesticide safety training. SFA employees must also hold a current Pesticide Applicator License issued by the Texas Department of Agriculture (TDA). A copy of the applicator's license shall be provided to the Environmental Health, Safety, and Risk Management Department (EHSRM) at P.O. Box 6113, or by email to safety@sfasu.edu.

Several regulating authorities provide guidelines and monitor the use of commercial pesticides. For more information on pesticide usage, please contact EHSRM (468-6034) or visit one or more of the following agencies:

- **Texas Department of Agriculture** (Pesticide Use and Application)
Agricultural Contact: 800-835-5832, Structural Contact: 800-918-4481
www.texasagriculture.gov/RegulatoryPrograms/Pesticides
- **Texas Department of State Health Services** (Pesticide Exposure Program)
Contact: 800-588-1248
www.dshs.texas.gov/epitox/pest

- **Texas Commission on Environmental Quality** (Pesticide application on or near water bodies)
Pesticides General Permit Contact: 512-239-4671
www.tceq.texas.gov/permitting/wastewater/general/pestgpair
- **U.S. Environmental Protection Agency** (Pesticide Worker Safety)
Contact: pesticidewebcomments@epa.gov
www.epa.gov/pesticide-worker-safety/agricultural-worker-protection-standard-wps

II. General Pesticide Safety

To help reduce the hazards associated with pesticides, the following quick guidelines provide pertinent information for the safe handling of pesticides at SFA:

- All pesticide handlers must be at least 18 years old to work directly with pesticides, application equipment, or open pesticide containers.
- Check all pesticide equipment before you use it to ensure proper working condition.
- Read pesticide labels carefully. Follow the label direction when mixing, applying, storing, or disposing of pesticides.
- Wear personal protective equipment (PPE) to prevent skin contact, inhalation, and mucous membrane exposure when handling pesticides (mixing, transporting, and applying).
- Do not eat, drink, or smoke when handling pesticides.
- Post application records in a central area for employees to view. Include Safety Data Sheets (SDS), a centrally located pesticide safety poster (Appendix A), and the up to date application information poster (Appendix B).
- Do not transport, mix, or use pesticides unless you can call for help if needed.
- Keep an ample supply of water nearby to flush exposed areas in case of a spill.
- Eyewash systems for handlers must be located at pesticide mixing/loading sites.
- Wash clothing and bathe after working with pesticides to ensure that all chemicals are removed from clothing and skin.
- Always handle pesticides downhill from wells, cisterns, sinkholes, ditches, or standing water.
- Do not apply pesticides when rain is imminent or if the wind could affect the spraying area.
- Triple-rinse spray equipment before storing.
- Triple-rinse spray empty containers before properly disposing of it as listed on the label.

III. Preparing to Apply Pesticides

Thinking ahead and properly preparing pesticides for application is essential for chemical safety and protection. Looking at the bigger picture, plan and prepare for all types of possible situations protects the university, employees, the public and students from chemical poisoning. Follow the steps below to properly prepare for pesticide application:

A. Plan Ahead

Before beginning the application, consider how all possibly affected personnel, students and public shall be notified that a restricted-entry interval (REI) is in effect. Reach out and inform everyone in and around the application area giving them time to protect themselves from harmful chemicals. By using signage to indicate all areas where pesticides have been applied you can direct foot traffic away from the area. Once the application is complete, the REI will keep the signs in place and the traffic away from the area until it is safe for re-entry.

B. Before You Begin

Always read chemical labels before attempting to work with pesticides. Prepare for a possible emergency by knowing the proper first aid procedures associated with the pesticide, and a decontamination station. A decontamination station contains clean water, soap, and single-use towels in case of contamination. A decontamination zone needs to be within ¼ of a mile of the employee's work area. As stated in Title 40 CFR 170.411(b) (1) "Decontamination supplies for workers", and 170.509(b) (1) "Decontamination and eye flushing supplies for handlers".

C. Move Pesticides Safely

Careless chemical transportation can cause spills and contamination. Do not carry or transport pesticides in an enclosed area, such as a car. Be sure to secure the pesticides to prevent shifting or bouncing. Furthermore, never leave your vehicle or MUV unattended when transporting chemicals.

D. Select Application Equipment

In accordance with the manufacturer's directions; choose suitable equipment to properly apply pesticides. Before using the equipment, inspect hoses, gaskets, nozzles, and tanks to confirm they are in good working order.

E. Select Appropriate Personal Protective Equipment

Regardless of the pesticide's toxicity; always wear a long-sleeve shirt and pants when working with pesticides. Wear additional protective equipment, as necessary and in accordance with the manufacturer's directions. Inspect all PPE before each use for leaks, holes, tears, or worn places. Repair or discard any damaged equipment. Each University department is responsible for providing the proper PPE for their employees.

IV. Mixing Pesticides

Always read and carefully follow manufacturer's instructions when mixing pesticides. Even if you are familiar with a particular chemical, reread the label to ensure that you have the latest instructions and safety information. In addition, follow these guidelines for mixing pesticides:

A. Work in a Safe Area

The pesticide mixing and loading area should be well ventilated, well lit, and downhill from any water sources. Concrete slabs are ideal for mixing chemicals since they allow for easy cleanup.

B. Measure Chemicals Correctly

Measure and mix pesticides carefully. Never mix different pesticides except as directed chemical manufacturer's label or instructions. Do not use more chemicals than prescribed by the pesticide manufacturer. The overuse of pesticides is illegal, and may result in the following:

1. Higher pest control costs
2. Pesticide residue in food
3. Surface water pollution
4. Groundwater pollution
5. Pesticide resistance

C. Pour Pesticides Carefully

Always wear eye protection and take care not to splash chemicals when pouring pesticides. Never use your mouth to siphon pesticides.

V. Applying Pesticides

The responsibility lies with the pesticide user for protecting yourself, the campus community, and the environment from misuse of pesticides. By not following manufacturer's instructions and best practices, the user can leave the university open for all types of liability issues and, most importantly, injury to the community and its environment. Follow these safety guidelines when applying pesticides:

A. Minimize Exposure

Even mildly toxic chemicals can harm you if you use them daily. Take care to minimize your exposure to any chemical. Avoid working in pesticide spray, mist, or runoff. Always work with another person when working with hazardous chemicals.

B. Avoid Applying Pesticides in Sensitive Areas

Avoid spraying pesticides near beehives or densely populated areas (e.g., student common areas, playgrounds, etc.). If you must apply pesticides in sensitive areas, plan to do so when the weather is calm and people are not around.

C. Avoid Pesticide Drift, Runoff, and Spills

Pesticides that fall outside the targeted application area can be very hazardous. Choose weather conditions, equipment, and chemicals that eliminate or minimize the risk of pesticide drift, runoff, and spills.

D. Avoid Equipment Accidents

Equipment accidents are often caused by poor maintenance and improper work habits. Avoid equipment accidents by following all manufacturer’s operating instructions specific to the equipment being used, cleaning, and properly maintaining the equipment.

E. Avoid Heat Stress

Be aware of your work, health condition, and fluid intake. The PPE you wear can put you at risk for heat stress and other heat-related illnesses. Take breaks, use shade, and drink water.

VI. Job Completion

Once the job is complete, the safety of the community continues to be a priority, particularly when there is no one around to provide direction. The following guidelines are necessary to ensure that the public, employees, students, and the job site are kept safe from any possible contamination.

A. Post “No-Entry” Signs

After the pesticide is applied post warning signs (Defined and shown in Appendix C) at the site letting people know they need to stay away from the treated area. The “Danger, Keep Out” signs prohibit entry into pesticide-treated fields until residues decline to a safe level.

B. Post Application Information

Using the application information board (defined and shown in Appendix B) post the following information for 30 days, or more if the REI calls for a longer waiting period.

- Date of application
- Start and end time of application
- Location and description of the area treated.
- The crop that was treated
- The type of Pesticide
- The active ingredient
- The EPA Registration #
- The restricted-entry intervals (REI)
- Safety Data Sheets for the chemicals in use.

C. Removing Personal Protective Equipment (PPE)

There is a specific order to removing PPE. It is recommended to remove PPE in the following order:

- Remove garment of clothing inside out while also removing gloves.
- Use clean hands to remove the clean portion of glasses/goggles and masks.
- Wash and sanitize hands.

Remember that dirty gloves touch the dirty side of PPE, and clean gloves, clean hands touch the clean part of your PPE. Always wear your boots, gloves, and eye protection when washing dirty PPE. Keep all clean clothes and PPE away from pesticides and contaminated areas.

D. Personal Protective Equipment Care and Disposal

Clothing or other absorbent materials that have been drenched or heavily contaminated with an undiluted pesticide that has the signal word "DANGER" or "WARNING" on the labeling must be disposed of properly. These contaminated items shall not be reused.

Pesticide handlers should clean their clothing and PPE according to the manufacturer's recommendations. If someone other than the licensed pesticide handler will be cleaning the clothing or PPE, the handler shall inform the people who clean or launder the items the following information:

- The items may be contaminated with pesticides.
- There may be potentially harmful effects of exposure to pesticides.
- How to protect themselves when handling contaminated PPE.
- How to clean PPE correctly.

VII. Pesticide Storage and Disposal

The following summary of EPA storage criteria should be followed for pesticides labeled with the signal words DANGER, POISON, WARNING, or the skull and crossbones symbol. These procedures and criteria are not necessary for the storage of pesticides classed as less toxic (CAUTION word on the label) or for those registered for use in the home or garden. This information will assist in situations that involve successfully storing and disposing of chemicals, as well as additional operational actions.

A. Storage Facility

- The permanent pesticide storage facility should meet the following guidelines:
- Dry, well-ventilated, separate room, building, or covered area with fire protection (e.g., dry chemical fire extinguisher).
- Secured by fencing and/or locked doors.
- Signs on rooms/buildings to provide hazard warning (e.g., DANGER, POISON, and PESTICIDE STORAGE).
- Pesticide equipment should be properly labeled as contaminated and not removed from the site until decontaminated.
- Treat contaminated runoff and water collected as excess pesticide.

B. Pesticide Storage Procedures:

- Store pesticide containers in rows with the labels visible.
- Place contents from damaged containers in sound containers.
- If relevant, segregate pesticides by formulation.
- Store rigid containers in an upright position and keep lids securely closed when not in use.
- Maintain a complete inventory indicating the number and identity of containers.
- Check containers regularly for corrosion and leaks.
- Keep suitable absorbent (e.g., vermiculite) on hand in case of spills.
- Triple Rinse equipment before storing it.

Never pour unused pesticides down sink or floor drains, storm drains, or into surface water.

C. Storage Area Safety Precautions:

- Inspect pesticide containers for leaks before handling them.
- Do not allow unauthorized personnel in the storage area.
- Do not store pesticides next to items intended for consumption by animals or humans.
- Do not eat, drink, smoke, or chew tobacco where pesticides are stored, mixed, handled, or applied.
- Do not store beverages, food, eating utensils, or smoking material in the storage or loading areas.
- Wear rubber gloves while handling containers of pesticides.
- Wash hands immediately after handling pesticides. Remove contaminated protective clothing immediately; extra sets of clean clothing should be nearby.

D. Inventory Control:

- Provide EHSRM with an annual inventory of all pesticide products including the name, quantity, location, and contact information of the responsible person. The annual inventory is due by December 15th.

E. Disposal:

- Unused or outdated pesticides must be disposed of as hazardous chemicals
- Contact EHSRM at 468-6034 for proper waste disposal procedures.

IMPORTANT!

Never leave pesticide containers at a field site. Be sure to account for every container used. Triple rinse before safely disposing of empty containers.

VIII. Spills

In the event of a spill, there are steps that employees can take to efficiently contain the situation and ensure that no additional damage is done.

If an employee is showing signs of exposure call 911 in case of an emergency or take the individual directly to the nearest emergency room.

1. Control – add a barrier around the spill and remove employees from the spill zone.
2. Contain – add absorbent or kitty litter to the spill area to soak up the chemical
3. Clean up – Sweep and bag the absorbent so it is contained and no longer free.
***Do not use water to clean the area this causes the chemical to spread.**
4. Contact EHSRM at 468-6034 for further clean-up instructions.

IX. Training and Inspection

As required by Title 40 CFR 170.401 “Training requirements for workers” pesticide handling employees are to attend a yearly training that is conducted by a qualified trainer.

SFA is required to retain a copy of training records for this training for two years following the date of the training. Employees that attended the training have the right to request a copy of the training record from EHSRM at any time within the two-year timeframe.

Certifications shall be inspected bi-annually to confirm that all handlers’ credentials are up to date and compliant with standards. This requires the Environmental Safety Officer to review the credentials and if there is a gap in training longer than 12 Months for a handler the Safety Officer will then schedule a training with the employee. Following the training, the record will be updated.

X. Appendix A “Centrally Located Pesticide Safety Poster”

This poster will list emergency information including the emergency contact and nearest hospital. It will also provide safety information to help protect the handler from contamination.

This poster can be downloaded from the SFA Safety webpage.

Protect Yourself from Pesticides

IN AN EMERGENCY:

Get medical help nearby.

Name: _____

Address: _____

Phone number: _____

If you need an ambulance, tell them where you are.

Facility name: _____

Facility location: _____

If you have questions or concerns, call the pesticide regulatory agency.

Name of state/federal pesticide regulatory agency: _____

Address: _____

Phone number: _____

FOR MEDICAL TREATMENT INFORMATION, CALL THE POISON CONTROL CENTER. 1-800-222-1222

This poster contains pesticide safety information that is required under the Worker Protection Standard as revised in 2017, 40 CFR 155.111 (a)(1) (i)-(iv).

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Avoid getting pesticides on your skin or in your body. Pesticides can be in many places. They can be on plants, in plants, in soil, and in irrigation water. Pesticides can drift in the air from nearby applications. They can also be on tractors and other equipment. Pesticides can also be found on used goggles, gloves, boots, and other personal protective equipment.

Protect your body from pesticide residue. Wear long-sleeved shirts and long pants when working. Also, wear shoes, socks, and a hat or scarf.

Stay out of treated areas when told, and whenever you see signs like this displayed. When you see a pesticide application taking place, stay back. Applicators must suspend their work if you get too close.

Wash your hands before you eat, drink, or chew gum. Also, wash before smoking, using the toilet, or using your phone.

Wash your body and hair with soap or shampoo right after work; then put on clean clothes.

When pesticides are spilled or sprayed on your body, wash immediately. Water, soap, and towels must be provided nearby. Use the nearest clean water, including springs, streams, and lakes, if they are closer to you. After that, wash your body and hair with soap or shampoo as soon as possible. Put on clean clothes.

Wash your work clothes before wearing them again. Wash them separately from other clothes.

Get medical help as soon as possible if you think pesticides caused an injury or illness.

Questions about pesticides? Call 1-800-858-7378 (National Pesticide Information Center)

XI. Appendix B “Application Information Poster”

The application information poster lets employees know what chemicals have been applied in the last 30 days. This sign should be displayed outside of the closest common area for applicators to view the application status.

The information must be displayed whenever:

- any worker or handler employed by SFA is working,
- in the past 30 days, a pesticide that references the WPS on the labeling has been applied;
- or a restricted-entry interval has been in effect.
- The information can be displayed continuously.

This poster must include:

- the location and description of the area to be treated;
- the product name, EPA registration number and active ingredient(s) of the pesticide;
- time and date the pesticide is scheduled to be applied; and
- the restricted-entry interval for the pesticide.

This poster can be downloaded from the SFA Safety webpage.

Pesticide Application Information							
Date	Start/End Time	Location/Description	Plant	Pesticide	Active Ingredient	EPA Registration #	REI
1/1/2020	07:45:00 AM/01:30:00 PM	Intermural Fields	Grass	Round-Up Pro Herbicide	Potassium salt of glyphosate	524-579	4 Hours

XII. Appendix C “Warning Sign”

This poster can be downloaded from the SFA Safety webpage.

