

Communication is a key to pesticide safety

By Tim Gaver
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This continuing education unit (CEU) article will grant one General Standards (CORE) CEU when submitted and approved.

Pesticide application safety is the responsibility of all those involved when pesticides are being applied to agricultural crops. This includes production managers, spray and harvesting supervisors, mixers/loaders and the individuals who are actually applying the pesticides. Communication between all of these parties is required on a daily basis to effectively reduce the risk of pesticide-related illness and injury to agricultural employees.

KNOW THE LAWS

There are a number of federal and state laws that govern the use of pesticides in the United States and Florida.



The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) regulates the production, transportation, sale, use and disposal of all pesticides. Last amended in 1988, this act states that the Environmental Protection Agency (EPA) is responsible for authorizing or registering pesticide products in the United States. Pesticide labels issued by the EPA contain language that provides for reasonable provisions to prevent injury to humans and adverse effects on the environment if used according to the language on the label. Anyone who uses a labeled pesticide in a manner inconsistent with the label is subject to civil and/or criminal penalties.

The Florida Pesticide Law, Chapter 487 F.S., governs pesticide dealers and certified pesticide applicators that wish to purchase or supervise the application of restricted use pesticides (RUP) on farms, ranches, groves, nurseries or gardens that produce agricultural commodities. The EPA requires that these individuals demonstrate competency to use restricted use pesticides by passing two examinations administered under the rules of the Florida Department of Agriculture and Consumer Services (FDACS), Bureau of Compliance Monitoring. These individuals are then licensed as Certified Pesticide Applicators and must participate in continuing education programs to maintain their licenses.

The Federal Worker Protection Standard (WPS) was established by the EPA in 1992 with the intent to protect agricultural workers from pesticide exposure. Worker Protection Standards require agricultural employers who use pesticides to provide: 1) information to their employees about exposure to pesticides, 2) protections against exposures to pesticides and 3) ways to mitigate exposure to pesticides. Complying with the requirements of the WPS involves both written and oral communication between the employer or his supervisors and the employees on a daily basis.

PESTICIDE TRAINING

Agricultural workers such as harvesters or irrigation repair crews that do not work directly with pesticides must receive pesticide application training within five days after starting work and coming in contact with crops that have been treated with a pesticide within the last 30 days. Pesticide handlers or those employees who will be working with pesticides must receive the appropriate training before they start work. This training should include, but is not limited to, the following topics:

- How to read and understand the information on a pesticide label
- Potential hazards of pesticides resulting from toxicity and exposure
- Signs and symptoms of common types of pesticide poisonings
- Supplying appropriate personal protective equipment (PPE)
- How to obtain emergency medical care
- Prevention, recognition and first-aid treatment of heat-related illness
- Safety requirements for handling, transporting, storing and disposing of pesticides, including general procedures for spill cleanup
- Environmental concerns such as drift, runoff and hazards to wildlife
- Warnings about taking pesticides home

Training may be given by Certified Pesticide Applicators or individuals who have a Train-The-Trainer certification. It can also be accomplished by having the worker watch an EPA-approved video or CD/DVD. It is recommended that workers sign a document indicating they have received appropriate pesticide safety training; the document should be filed in their personnel folders for future reference. It is important that this training be taken seriously by all involved, in order to indicate to the employee that his employer and supervisory personnel are sincerely concerned about pesticide safety in the workplace. Issuing the employee a copy of the EPA or FDACS "Protect Yourself from Pesticides" brochure also emphasizes the employer's commitment to pesticide safety. These brochures are available in English, Spanish and Creole/

The image shows the Tropicana Pure Premium logo at the top, with the text 'THE ORIGINAL Tropicana PURE PREMIUM'. Below the logo is contact information for the Tropicana Area Manager, Eddie Wertz, including office and mobile phone numbers. At the bottom of the advertisement is contact information for the Southern Zone, including the name Craig Hampton and three phone numbers. In the center is a map of Florida with county boundaries and names labeled. The counties shown on the map are: Hernando, Pasco, Hillsborough, Manatee, Sarasota, Charlotte, Lee, Collier, Loke, Orange, Osceola, Polk, Lakeland, Hardee, Arcadia, DeSoto, Highlands, Glades, Hendry, Labelle, Seminole, Brevard, Indian River, Okeechobee, St. Lucie, Martin, and Palm Beach.

Haitian and can be obtained from a local county Extension office.

RECORDKEEPING REQUIREMENTS

The WPS rule also requires that a record of all pesticide applications made on the agricultural operation be posted at a central location so that employees and any other authorized individual entering the property may view that information. At a minimum, that information must include the location of the application, the product name, EPA registration number, active ingredient, time and date the pesticide was applied, and the restricted entry interval (REI) for the pesticide. This information should remain posted for at least 30 days after the REI for that application has expired. The REI for a pesticide application is the interval after a pesticide is applied that must pass before workers can enter that area without wearing PPE. The REI is listed on the product label and for each labeled crop, and may be as brief as one hour, or up to 30 days in some cases. Most REIs are in the range of four hours to 48 hours, and are obviously meant to prevent exposure to workers not wearing PPE. Workers may drive through the area without PPE, but leaving the vehicle in the treated area is regarded as early entry and requires wearing all required PPE as indicated on the label. An additional requirement of the WPS is that all workers be informed at the beginning of the work day if they are going to be working within a quarter mile of an area with an REI still in effect.

Harvesting managers or supervisors should be aware of REIs that are in place by communicating daily with production supervisors and planning their harvesting activities accordingly. Harvesting crew leaders should make it a habit to check the pesticide application records daily at the central location to be sure they will not be entering an area with an REI still in effect. Another important label requirement is a "days to harvest" or "pre-harvest interval" (PHI) following pesticide applications in order to reduce exposure to harvesters and also to reduce the pesticide residue that may ultimately remain on agricultural products when they reach the consumer. PHIs are quite variable, ranging from zero to 45 days, with most falling in the one- to seven-day range. Constant communication is again necessary between the production and harvesting departments in order to avoid harvesting fruit or

vegetables in blocks that still have a PHI in effect.

While one of the initial training topics required by the WPS for new employees is how to read and understand the information on a pesticide label, ensuring that employees are familiar with the potential hazards and first-aid procedures associated with each pesticide they work with should be an ongoing process. The Florida Agricultural Worker Safety Act (FAWSA), effective in 2004, requires that a Material Safety Data Sheet (MSDS) for any pesticide used in the workplace be provided on request to agricultural workers. An MSDS contains detailed information about the physical characteristics of a pesticide and potential impacts about its use. It then follows that a copy of the MSDS for each pesticide used on an agricultural operation should be maintained at a location where workers can access this information if necessary. In the event of a pesticide poisoning, a copy of the MSDS for any suspected pesticide involved should accompany the individual to the medical facility and may expedite treatment.

Neither the WPS or FAWSA requires that a copy of pesticide labels used in the workplace be maintained at a central location, but the requirements that employees be constantly made aware of the potential hazards and safety precautions listed on the labels of pesticides they are using warrant keeping these labels on file. Both pesticide labels and MSDS can be easily accessed and printed from the www.cdms.net website.

UNDERSTANDING THE LABEL

Before starting to use a pesticide that has not previously been part of a pest management program, pesticide applicators should be made aware and understand the contents of a number of sections of the label. This should include, but not necessarily be limited to, the following information on the pesticide label:

- Signal Word
- Statement of Practical Treatment
- Hazards to Humans and Domestic Animals

- Personal Protective Equipment
- Environmental Hazards

The signal word on a pesticide label indicates the relative toxicity of the product in its concentrated form. There are four signal words used on pesticide labels. A DANGER/POISON signal word, always accompanied by a skull and crossbones

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	Triangle Chemical	863-699-5680	

symbol, indicates that the product is highly toxic. A WARNING signal word indicates the product is moderately toxic. There are two CAUTION words, indicating that the product in its concentrated form is either slightly toxic or relatively non-toxic. Employees — especially mixers/loaders — should be well aware of the significance of the product signal word.

The Statement of Practical Treatment section provides first-aid information about accidental oral, ocular (eye), inhalation or dermal exposure. The proper antidotes and treatment for medical personnel treating a victim are included in this section.

Precautionary statements to avoid human and animal injury are included in the Hazards to Humans and Domestic Animals section. General statements about avoiding exposure and how to deal with those instances may be included in this section.

The Personal Protective Equipment section contains specific instructions concerning the type of clothing that must be worn by pesticide handlers. The appropriate PPE must be supplied by the employer and be in clean and workable condition. There may be different PPE requirements for mixers/loaders, applicators or those applicators who apply pesticides from enclosed cabs.

Both spray supervisors and applicators should be aware of the information found in the Environmental Hazards section. Common warnings include statements about potential contamination of water sources, toxicity to honey bees, fish and aquatic invertebrates, and avoiding runoff. All employees should be aware of the potential effects of pesticides to the environment if they are not used properly.

In addition to the required dialogue about pesticide label information, REIs and PHIs, conducting regular pesticide safety meetings with employees can help to promote improved worker performance and pest management success. It should be evident that maintaining a workplace environment that places a high priority on pesticide application safety involves a coordinated effort that is highly dependent on frequent and effective communication between management, supervision and the pesticide applicators.

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‘Communication is a key to pesticide safety’ test

To receive one CORE continuing education unit (CEU), read “**Communication is a key to pesticide safety**” in this issue of *Citrus Industry* magazine. Answer the 20 questions on the magazine’s website (www.citrusindustry.net) or mail the answers and application information to the address at the bottom of this form. The article and test set will be valid for up to one year from the publication date. After one year, this test will no longer provide a CEU.

1. Pesticide application safety is the ultimate responsibility of the spray supervisor in charge of spray applications. T F
2. The Federal Worker Protection Standard (WPS) was developed to help protect agricultural workers from pesticide exposure. T F
3. Pesticide application training required by the WPS must be given within 15 days after an employee starts work. T F
4. The restricted entry interval (REI) for a pesticide application requires workers wear PPE in that block until spraying is completed in that block. T F
5. After new employees receive pesticide application training, they do not need further training until the supervisor notices a safety issue in the field. T F
6. The Florida Agricultural Worker Safety Act requires that an MSDS of all pesticides used on that agricultural operation be on file and be available to workers. T F
7. The signal word on a pesticide label indicates the relative toxicity of the pesticide product in its concentrated form. T F
8. Records of pesticide applications must be maintained at a central location until the crop is harvested on that location. T F
9. The EPA is responsible for authorizing or registering pesticide products and is very concerned about worker safety and the environment. T F
10. Pre-harvest intervals (PHIs) are listed on the label and are intended to reduce pesticide exposure to harvesters and consumers. T F
11. Discussing the label information on a new pesticide product is not necessary because most of the information on labels is identical. T F
12. While not legally required, keeping a copy of every pesticide label used in the workplace is highly recommended. T F
13. The personal protective equipment (PPE) portion of the label may require different PPE for mixers/loaders and applicators working from enclosed cabs. T F
14. Regular pesticide safety meetings are only recommended if an employee is involved in a pesticide poisoning incident. T F
15. Pesticide safety training for new employees can be given by a fellow employee if he has been a pesticide applicator for a number of years. T F
16. Workers and harvesters should be notified that an REI is in place if they are going to be working within a quarter mile of that site, even if they know it was sprayed the previous day. T F
17. Restricted use pesticides (RUPs) may only be purchased or applied under the supervision of a certified pesticide applicator. T F
18. Harvesting crew leaders only need to talk to their harvesting supervisor every couple of days to be sure they are not going to be harvesting in a block in which an REI may be in effect. T F
19. It is the responsibility of the employee to see that he or she wears the proper PPE and may have to pay for PPE that is damaged. T F
20. Pesticide application safety is the responsibility of everyone involved in the pesticide application process. T F

Pesticide Applicator CEU Form

First Name: _____ Last Name: _____

Email: _____

Certified Pesticide Applicator Number: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____

Please mail the answer sheet or a copy of the form to: Tim Gaver, St. Lucie County Extension Service, 8400 Picos Road, Suite 101, Fort Pierce, FL 34945-3045.

If you have questions regarding this form, test or CEUs, email Tim Gaver at tgaver.49@ufl.edu or call (772) 462-1660.