 COASTAL RESEARCH AND EDUCATION CENTER <i>College of Agriculture, Forestry and Life Sciences</i>		<i>Document Title</i> Pesticide Worker and Handler Procedure	
<i>Current Revision Date</i> 02 FEB 2024	<i>Origin Date</i> 02 FEB 2024	<i>Document Number</i> SOP-004-CREC	<i>Rev Level</i> A

PURPOSE

The objective of this document is to outline the required education, training, and procedures for employees at the Coastal Research and Education Center (CREC) who are exposed to pesticides when completing their work. These procedures should be followed by all employees working in the field or greenhouses at CREC, whether applying pesticides or merely working where they have been applied, to reduce harm from pesticides to themselves, other workers, and the environment. CREC is dedicated to keeping our employees and the environment healthy and safe. By establishing and enforcing this document, we can work to diminish the adverse effects of pesticides.

SCOPE


Employees can be exposed to pesticides when working in any of the fields or greenhouses at CREC. Pesticides are associated with hazards and illnesses that can adversely affect humans, wildlife, and non-target plants. Pesticides can cause acute and delayed effects that can be severe. These procedures apply to any employee working in areas where pesticides may have been applied and/or any employee who is actively applying pesticides.

Reference Standard

Environmental Protection Agency: 730-N-16-001

RESPONSIBILITIES

1. Each pesticide applicator is responsible for applying pesticides in a safe manner with other workers, wildlife, and the environment in mind.
2. If a pesticide applicator is not comfortable with any of the procedures below, they are responsible for requesting assistance.
3. Each pesticide applicator is responsible for keeping up to date records of pesticide applications and posting them in the CREC Central Location (Break Room – White


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Building) in a timely manner and as soon as possible after completing a pesticide application.

4. Each pesticide applicator is responsible for posting clear and visible signage indicating a particular field or greenhouse has been treated with pesticides. Signage must be placed at the place of application in a timely manner and as soon as possible after completing a pesticide application. Signage is to be posted at all regularly used entrances to the treated greenhouse or field, even when multiple entrances are present, and must remain in place until the product label-specified restricted entry interval (REI) has lapsed. Only when absolutely necessary, to ensure the quality of a research project is not diminished, may a worker, using appropriate product label-specific personal protective equipment (PPE), enter a greenhouse or field space that has been treated before the product label-specified REI has lapsed.
5. All CREC employees are encouraged not to enter greenhouse or field space where one's lab group does not have an active project unless invited to accompany another employee whose lab is actively working in said space. When it is necessary to enter greenhouse or field space where one's lab does not have a current project, each employee must check the pesticide application log at the CREC Central Location for any recent pesticide applications before entering. Employees must remain observant when entering greenhouse or field space, even after checking the pesticide application log at the CREC Central Location, looking for clearly posted signage indicating a pesticide application has taken place and the REI has not yet lapsed.
6. A CREC technician, holding a current South Carolina (SC) certified pesticide applicator's license, or another current SC pesticide license holder, is responsible for training new and current employees on the Worker Protection Standard (WPS) annually.

DEFINITIONS


- Adjuvant: substances added to pesticides before application such as diluents, surfactants, oils, conditioning agents, or defoaming agents.
- Agricultural Worker: someone who works in areas where pesticides have been applied or works on equipment that applies pesticides.

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- Application Exclusion Zones (AEZ): the area being treated with a pesticide and a product-specific distance away from the equipment where only equipped applicators can be.
- Personal Protective Equipment (PPE): equipment such as gloves, respirators, chemical resistant suits, etc. used to protect the body from the harmful effects of pesticides. PPE requirements are listed on the label of the pesticide.
- Pesticide: chemical, biological, or physical means to get rid of a pest. Pests can be insects, rodents, weeds, fungi, or nematodes.
 - The word pesticide in this document refers to chemical pesticides such as insecticides or herbicides that are applied in the field or greenhouse to prevent, decrease, or eliminate pests.
- Pesticide Handler: Pesticide Handler: someone who mixes, loads, transfers, or applies pesticides, including those who clean, handle, adjust, or repair the parts of mixing, loading, or application equipment that may contain pesticide residues. A pesticide handler may have a pesticide license. A full description of Pesticide Handler can be found at the EPA’s following website page entitled “Definition of a Pesticide Handler Under the Worker Protection Standard”:

[EPA Worker Protection Standard: Definition of Pesticide Handler](#)


- Restricted Entry Interval (REI): the amount of time an area is unsafe to enter after a pesticide has been applied.
- Safety Data Sheet (SDS): a document given by a manufacturer of a pesticide that lists chemical properties, toxicity, first aid, hazards, personal protective equipment, and emergency procedures to follow in the case of a spill, leak, or exposure to the pesticide.
- Worker Protection Standard (WPS): a program established by the Environmental Protection Agency to protect agricultural workers and pesticide handlers from the dangers of pesticide exposure.

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PROCEDURES

For pesticide handlers:


- Before application:
 - Read the pesticide label. The pesticide label will provide necessary information such as the EPA registration number, type of pesticide, precautionary statements, first aid statements, required PPE, hazards, directions for use, storage and disposal instructions, and agricultural use requirements.
 - Calculate the application rate and dilutions to pesticide as most pesticides are not ready-to-use and will not be applied without dilution.
 - Acquire and put on appropriate PPE.
 - Inspect the equipment used to apply the pesticide before loading it with pesticide and other adjuvants.
 - Check to make sure the application equipment has been properly calibrated recently. If it has not been, place a request with the technician responsible for sprayer maintenance and calibration.
 - Check to make sure appropriate nozzles are used. This is especially important on application equipment featuring multiple spray tips and nozzles on a single nozzle body.
 - Gather decontamination equipment – soap, at least 3 gallons of water, and single use paper towels. Keep these accessible throughout the application of pesticides to use in the case of pesticide exposure.
 - Measure, mix, and load pesticides and any required adjuvants to the equipment. Make sure appropriate PPE is worn.
 - If the pesticide container is empty, remove all labels, caps, foil lids, etc. from the pesticide container, triple rinse the container to remove all pesticide residue, punch holes in the bottom of the container so that the container can no longer contain any type of liquid substance, and put the container in the trash.
 - If the pesticide container is not empty, place it back in the appropriate cage.

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- Know where the SDS is for the pesticide applied. It needs to be readily available in case of pesticide exposure. It is beneficial to have web pages to the specific pesticide product label and SDS open in a mobile device web browser.
- Know where spill kits are in case of a spill or leak of pesticide. If there is a pesticide spill or leak it needs to be controlled, contained, and cleaned up as fast as possible.
- During application:
 - Wear appropriate PPE and apply the pesticide per label instructions.
 - Be aware of the proper speed, whether walking or on a tractor, and spray tip height to achieve the desired pesticide application output and pattern.
 - Be aware of the Application Exclusion Zone (AEZ) and stop actively applying pesticides if anyone or anything gets in this zone. Continue applying pesticides once the area is cleared.
- After application:
 - Clean equipment and remove PPE safely. Clean PPE if it is reusable.
 - Notify other employees about the pesticide application by posting a clear and visible sign at all entries to the pesticide application site.
 - Record pesticide application information in records located in the pesticide application log at the CREC Central Location (Break Room – White Building).

For agriculture workers:

- When working in the field or greenhouse, look at pesticide records to make sure the area has not had pesticides applied recently and if it has, make sure the REI has expired. Double check once at the field/greenhouse that there are no warning signs posted.
- Do not go near fields or enter greenhouses while pesticides are being applied.
- If authorized to enter an area that has an REI in affect, make sure to wear the appropriate PPE as indicated on the label.

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TRAINING & EDUCATION

New employees shall be trained on the Worker Protection Standard as set forth by the Environmental Protection Agency and CREC’s Pesticide Worker and Handler Procedures before any work in field or greenhouses can be done. After that, training on WPS and the use of pesticides at CREC shall be completed annually. This training makes employees aware of the hazards associated with pesticides, know how to safely apply pesticides, and ways to mitigate exposures and the hazards of pesticides.

Training must be given by a qualified trainer. A qualified trainer is someone who has a valid South Carolina Pesticide License.

Training records must be kept with the name of the EPA approved training given, printed and signed name of the trainer and their qualifications, printed and signed name of the trainee, and date the training was given. Records must be kept for 3 years by the Worker Protection Standard Trainer.

An employee that has a valid South Carolina pesticide license is exempt from WPS training, if proof of license is given to the Worker Protection Safety Trainer. Review of the CREC Pesticide Worker and Handler Procedures is required annually.

REVISION HISTORY

Revision	Date	Summary of change	Author	Approver
A	02/02/2024	Initial Issue	Tyler Campbell, Taylor McLaughlin, Sierra Zardus	<i>Patrick Wechter</i> 02.05.2024