

PESTICIDES: STORAGE & USE

Version: January 2020



Research Safety

Office of Research

UNIVERSITY OF GEORGIA

I. Purpose & Scope

This document is meant to provide an overview of the University's requirements for the use of pesticides in both the laboratory and in the field/greenhouse. The scope of this document also covers the storage of pesticides and their disposal or recycling. Please note that individual research areas may have additional requirements not detailed in this document.

II. Pesticide Storage

Facilities being used for the long-term storage of pesticides should meet the following minimum requirements:

- Floor drains are prohibited.
- Floors and shelves should be impervious to moisture.
- Pesticide containers must be secured to keep them from tipping over.
- Facilities should be mechanically ventilated to prevent accidental respiratory exposure.
- Storage areas should be securely locked when not in use to prevent unauthorized access.
- Adequate electrical or natural lighting must be provided.
- If pesticides are mixed at the facility, potable water must be provided for readily accessible emergency eyewashes and showers and sinks for handwashing.
- If original pesticide containers are damaged a suitable secondary container must be used to hold the remainder of the pesticide and prevent accidental release. These containers must be labeled as clearly as the primary container to identify the pesticide and the hazards presented. Pesticides should never be stored in containers that have been used or could feasibly be used to store food or drink.

III. Pesticide Usage

A. Personal Protective Equipment

Personal protective equipment (PPE) must be provided and used as required by the pesticide label. PPE may vary widely between application and early re-entry. Store clean PPE away from personal clothing and do not take used PPE home.

When a respirator is required by product labeling, personnel must be enrolled in the Respiratory Protection Program which will usually require a medical evaluation, fit test, and training on the use of the respirator. Please contact the Office of Research Safety for enrollment information.

PPE that has been heavily contaminated with pesticide having a signal word of “Danger” or “Warning” (check Section 2 of the Safety Data Sheet or the product label) should be disposed of and not cleaned for reuse. The PPE may need to be disposed of as hazardous waste. For information on disposal, please contact the Environmental Safety Division.

- B.** Restricted use pesticides or pesticides with state restricted uses must be applied by a certified applicator registered with the state of Georgia. Uncertified persons may apply restricted use pesticides only if they are under the direct supervision of a certified applicator and only if the pesticide label does not restrict application to certified applicators. The certified applicator is responsible for the actions of all persons under their supervision. Unless otherwise required by the label, the certified applicator is not required to be present at the time of application but must be available through conventional means of communication during the application process.
- C.** Safety Data Sheets (SDS) for each of the pesticides being stored and/or used should be made available to all employees handling the substance or required to enter an area where pesticides have been recently applied.

Non-registered pesticides or experimental pesticides should not be accepted for trial or research unless the manufacturer can provide information equivalent to what is given in a Safety Data Sheet (SDS). This may include but is not limited to the following:

- Pesticide type
 - Physical characteristics (flammability, incompatibilities, evaporation rates, etc.)
 - Hazards (both acute and chronic) associated with exposure
 - PPE required for use and application
 - Field re-entry requirements
- D.** During pesticide applications, keep workers and everyone other than appropriately trained personnel out of the area being treated.
 - E.** Restricted Entry Intervals

Do not direct or allow any worker to enter or remain in a treated area until the restricted-entry interval (REI) specified on the pesticide label has expired and all posted warning signs are removed or covered. There are certain situations during which re-entry into a treated area is allowed under the Environmental Protection

Agency's Worker Protection Standard (WPS). A list of these types of situations is provided in Appendix A of this document.

Please keep in mind that while some pesticides will have a single REI, others will have REIs that vary depending upon the crop, method of application, or the post-application activity to be performed. Always consult the pesticide label for detailed information about the REI length and any necessary PPE.

REIs are listed on the label under the heading "Agricultural Use Requirements" in the "Directions for Use" section or next to the crop or application method to which it applies.

IV. Postings & Signage

- A.** All doors to areas where pesticides are stored or used should be marked with a yellow Caution sign provided by the Office of Research Safety indicating the hazards posed by the pesticides being stored or used in the space. Additional signage may be posted by laboratories or greenhouses if deemed necessary.
- B.** Warning signs must be posted if required by the pesticide label or if the REI is greater than 48 hours for outdoor applications or 4 hours for enclosed spaces (e.g., greenhouses). It is recommended that signs always be posted for any application or use regardless of the REI length. All signs must be updated to appropriately display the pesticides applied, the time and date of application, and the earliest time that re-entry is permitted.

V. Pesticide Disposal and Recycling

A. Disposal of Canceled or Suspended Pesticides

Pesticides which can no longer be legally applied or used in any way must be disposed of in accordance with all applicable federal and state regulations, most commonly as hazardous waste.

The State of Georgia offers free pesticide collections throughout the year during which old and expired pesticides may be dropped off and collected for disposal by the state Department of Agriculture at no cost to the user or the University. Please contact the Office of Research Safety for additional information about these Georgia Clean Days.

B. Disposal of Empty Pesticide Containers

Always refer to the label affixed to the pesticide container you are using for instructions on how to properly dispose of the container when emptied.

Many empty containers can be recycled through the Georgia Department of Agriculture free of charge. Please contact the Office of Research Safety for additional information about these Georgia Clean Days.

VI. Contacts

Environmental Safety Division: 706-542-5801

Office of Research Safety: 706-542-5288

VII. References

Prudent Practices in the Laboratory: Handling and Management of Chemical Hazards,
National Research Council, 2011

Georgia Rules and Regulations, Chapter 40-21. Pesticide Use and Application, 2020.

Worker Protection Standard, 40 CFR Part 170, Environmental Protection Agency, 2015.

Appendix A: Under What Conditions is Early Entry Allowed?

Certain conditions must be met for early entry and even then early entry is only permitted for the following types of tasks:

- Short-term tasks - tasks lasting less than one hour and not involving hand labor (any activity performed by hand or with hand tools that might cause a worker to have substantial contact with surfaces that may contain pesticide residues).
- Limited contact tasks - tasks where worker contact is only with treated surfaces and limited to feet, lower legs, hands, and forearms
- Irrigation tasks - tasks related to irrigation or watering equipment where contact with treated surfaces is limited
- Emergency tasks - tasks that are necessary due to a forecasted or occurring natural event such as freeze, hurricane, hail, or flooding

Some examples of allowable conditions for early re-entry are provided by the EPA in the following table. Please note that this table is not meant to be exhaustive.

Condition	Short Term	Limited Contact	Irrigation	Agricultural Emergency
Wait at least 4 hours after the pesticide application is completed?	Yes	Yes	Yes	Yes
Wait until inhalation exposure level on the pesticide label has been reached or any WPS ventilation criteria have been met?	Yes	Yes	Yes	Yes
Maximum amount of time allowed per 24-hour period?	1 hour	8 hours	8 hours	No limit
Allowed for pesticides whose labeling requires double notification (verbal notification and	Yes, allowed for all WPS pesticides	No	No	Yes, allowed for all WPS pesticides

posting signs)?				
Are hand labor tasks permitted?	No	No	No	Yes, but must be related to the ag emergency
Employer provides special protections for early-entry workers regarding training, instructions, decontamination supplies and personal protective equipment (PPE)?	Yes	Yes	Yes	Yes
Need for entry could/could not have been anticipated	Doesn't matter	Only if need could not have been foreseen	Only if need could not have been foreseen	Only if circumstances could not have been anticipated when pesticide was applied
Entry is/is not an economic necessity	Doesn't matter	Only if delay would cause significant economic loss	Only if delay would cause significant economic loss	Early entry is only practice to prevent or reduce a substantial economic loss

<https://www.epa.gov/pesticide-worker-safety/protections-workers-who-must-enter-pesticide-treated-areas-early>