



TEXAS A&M UNIVERSITY SAN ANTONIO

Guidelines for Experimental Pesticide Use

This document provides an overview of the University's requirements for the use of experimental pesticides that are not already registered with the US Environmental Protection Agency (US EPA) nor the state of Texas 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.

1. Pesticide Research Requiring TAMUSA IBC Approval

a. Pesticide Use

There are two categories of experimental uses:

- i. Use of an active ingredient that is not yet registered by the EPA nor exempt from registration; and
- ii. Use of an active ingredient that is registered with the EPA, but:
 - a. The crop or type of site being tested is not included on the label, or
 - b. The use rate is higher than that listed on the label, or
 - c. The application timing is outside of label directions, or
 - d. The number of applications is more frequent than the label allows, or
 - e. The pre-harvest interval is shorter than allowed by the label, or
 - f. The tests conducted use an application method that is forbidden by the label.
- iii. Both categories of experimental use require permits, either state and/or federal (US Environmental Protection Agency), along with TAMUSA IBC approval before the applications and/or tests are made.
- iv. Laboratory testing of pesticides in the two experimental use categories listed above is allowed under collective and individual permits issued by the Texas Department of Agriculture (TDA). It is the researcher's responsibility to obtain all necessary permits.
- v. Pesticide use is limited to the organisms and procedures described in the approved IBC permit. Other organisms or uses require an amendment or submission of a new IBC permit.

b. Bioengineered and Transgenic Plants

- i. Plants may be bioengineered and/or genetically modified (transgenic) to contain a plant-incorporated protectant (PIP). A PIP is a pesticidal substance intended to be produced or used in a living plant or in the produce of a living plant. A PIP includes the genetic material necessary to produce the pesticidal substance and any inert ingredients in the plant or its product. Personnel must handle plants that include a PIP in the same manner as any other pesticide,

even if the plants are not yet registered as a pesticide with the EPA.

- c. Minimum Information Required for IBC approval
 - i. The common chemical name of the active ingredient,
 - ii. A Safety Data Sheet (SDS) for the product,
 - iii. The signal word used to complete the U.S. Environmental Protection Agency (EPA) registration process, and
 - iv. The use classification (general or restricted) is likely to be assigned by the EPA during the registration process.
 - v. All relevant EIPs (Texas or EPA)
 - vi. Permission statement from landowners, as applicable (see below)

2. Permitting Requirements

- a. Any user of experimental and/or unregistered pesticides in research must review both Texas and US EPA requirements and apply for an Experimental Use Permit (EUP) from one or both entities as applicable. A US EUP must be secured prior to applying for a Texas EUP.
- b. US EPA Permitting Requirements
 - i. It is the researcher's responsibility to review US Environmental Protection Agency's (US EPA) requirements to determine whether or not their experimental pesticide use requires an EUP.
 - ii. The process to apply for EUP license, including useful exemptions, can be found [on EPA website](#). Most experimental uses of pesticides are exempted from the need for an EUP.
- c. Texas Permitting Requirements
 - i. It is the researcher's responsibility to review the Texas Department of Agriculture's requirements to determine whether their experimental pesticide use requires an EUP.
 - ii. The use of pesticides and growth regulators in agriculture and research in Texas is covered under [Agriculture Code 5B76.A](#) where "Active ingredient" means:
 - 1. in the case of a pesticide other than a plant regulator, defoliant, or desiccant, an ingredient that prevents, destroys, repels, or mitigates a pest;
 - 2. in the case of a plant regulator, an ingredient that through physiological action accelerates or retards the rate of growth or rate of maturation or otherwise alters the behavior of an ornamental or crop plant or the product of an ornamental or crop plant;
 - 3. in the case of a defoliant, an ingredient that causes leaves or foliage to drop from a plant; or
 - 4. in the case of a desiccant, an ingredient that artificially accelerates the drying of plant tissue.

- iii. In Agriculture Code 5B76.A §76.047, the Texas Department of Agriculture may issue an experimental use permit (EUP) if it determines that the appliance needs the permit to accumulate data necessary to register a pesticide.

3. Compliance

- a. In addition to following all the requirements found in the approved IBC protocol, researchers must follow these additional general requirements for experimental pesticide use:
- b. EUP Application Records
 - i. Records must be kept of all experimental field applications, even if those applications are made to A&M-SA property. These records must be available to TDA, if requested.
- c. Written Permission for Applications
 - i. A written permission statement from the landowner/land manager is required for applications on a cooperator's land, as applicable. A copy must be submitted with IBC Application.
- d. Crop Tolerance Statement
 - i. Tolerance is defined as the maximum legal allowable limit for residues of a pesticidal active ingredient (or its metabolites) on food, feed, or fiber crops. Another term, used widely outside the US, is maximum residue level, or MRL. Residue values are usually expressed at parts per million (ppm) levels. Tolerances are set by individual countries and may vary from one country to another.
 - ii. All treated food or animal feed resulting from crop applications must have an existing tolerance which is greater than anticipated residues from the application, or be destroyed (e.g. lab testing, burning, landfill, plowing under). Personnel must include a statement detailing the date and method of crop destruction in the final application record. A list of existing tolerances may be generated using the Global MRL Database.
- e. Summary of Results
 - i. Personnel must submit summaries of experimental results to the IBC or Office of Research Compliance at the end of the research trial.
- f. Disposal and Storage
 - i. After the end of the research project, any remaining products must be returned through the supplier. Experimental pesticides cannot be disposed of by the TDA Wastes Pesticide Program nor the Texas A&M-SA Hazardous Waste Program. Plants containing PIP must be autoclaved and disposed of as per transgenic organisms' guidelines.
 - ii. Experimental products may be stored on Texas A&M-SA premises for up to three years from the end of the research project before being returned to the supplier. Storage requirements are described in a separate section below.
- g. Adverse Event Reporting
 - i. All accidents and unanticipated events must be reported to the IBC and the University Facilities and Operations.
 - ii. Adverse events in the application of experimental pesticides must be reported to the A&M-SA IBC and Office of Research Compliance.

- iii. Personnel are to immediately report any serious adverse environmental effects resulting from the application of the pesticide to the IBC, TDA, and/or EPA. TDA can be reached via telephone 800-TELL-TDA. The EPA requires reporting of adverse environmental effects from pesticide use, primarily by pesticide registrants under FIFRA Section 6(a)(2). This includes detailing incidents involving fish, wildlife, plants, or other non-target organisms, specifying affected species, symptoms, and habitat details. Individuals can also report incidents, and the EPA maintains an Incident Data System (IDS) for tracking these reports.

4. Experimental Pesticide Storage & Usage

a. Signage

- i. All doors to areas where pesticides are stored or used should be marked with a yellow caution sign provided by Environmental Health and Safety. Additional signage may be posted by laboratories or greenhouses if deemed necessary or required by the IBC.
- ii. Restricted Entry Interval (REI) 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.

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

- i. No floor drains can be present in the room used for storage.
- ii. Floors and shelves should be impervious to moisture.
- iii. Long term storage of pesticide requires as secondary containment or appropriate method to contain spill such as a spill pallet.
- iv. Facilities should be mechanically ventilated to prevent accidental respiratory exposure.
- v. Storage areas should be securely locked when not in use to prevent unauthorized access.
- vi. Adequate electrical or natural lighting must be provided.
- vii. Opening the containers with pesticides, or moving pesticides from one container to another, or mixing, must be done in areas where eye washes, showers, and sinks are readily accessible.

c. Personal Protective Equipment

- i. Personal protective equipment (PPE) must be provided and used as described by the pesticide label. PPE may vary widely between application and early re-entry. Clean PPE must be stored separately from personal clothing and used PPE cannot leave the A&M-SA campus.
- ii. 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 Compliance or IBC for enrollment information.

- iii. PPE that has been heavily contaminated with pesticide should be identified with “Danger” or “Warning” labels (check Section 2 of the Safety Data Sheet or the product label) until disposed. The PPE may need to be disposed of as hazardous waste. For information on disposal, please contact University Facilities and Operations.
- iv. Safety Data Sheets (SDS) for each of the pesticides being stored and/or used must be made available to all employees handling the substance or required to enter an area where pesticides have been recently applied.

Applicator Guidelines

Restricted use pesticides (RUP) or pesticides with state restricted uses must be applied by a certified applicator licensed with the State of Texas. Researchers must make careful determination because pesticides have both RUP and an EUP. Uncertified people may apply RUP 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 people 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.

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

During pesticide applications, workers and everyone other than appropriately trained personnel out of the area being treated.

Restricted Entry Intervals

Faculty and Staff must 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. 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. If the pesticide label does not specify the REI then follow the guidelines in 4 ii of this document.

Non ‘Ag Use’ pesticide labels have no REI however it is recommended that re-entry is not allowed until spray has dried or dust has settled.

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