

PPM 281: Policy on Pesticides & Related Chemicals: Use & Experimentation

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Note: For links to referenced documents see Section VI,
Related Information below.

I. POLICY SUMMARY

- A. The University of California (UC), Agriculture and Natural Resources (ANR) conducts research, performs extension activities, publishes pest management guidelines, and makes recommendations on the safe and efficacious use of pesticides and related chemicals. Any such activities are to be conducted in accordance with all applicable State and Federal laws and regulations. UC ANR personnel working with pesticides and related chemicals must read and follow all aspects of the California Code of Regulations (Title 3 Division 6, and Title 16 Division 19 – see item VI, *Related Information* below for a link). Throughout this section of the UC ANR Policy and Procedure Manual various code citations are referenced for emphasis but all aspects of the code are important and must be complied with.
- B. To insure the safety of persons potentially exposed to experimental uses of pesticides, microbial pesticides and spray adjuvants, UC in consultation with the Director of the California Department of Pesticide Regulation (DPR), has adopted the following policy pursuant to Title 3, California Code of Regulations, Sections 6260 (Authorization for Research) and 6268.
- C. Under Title 3, California Code of Regulations (CCR), Section 6268, Exemptions from Authorization for Research Authorization, persons employed by colleges and universities who will be conducting pesticide research are exempt from obtaining written authorization for their research provided the college or University has a policy covering experimental pesticide use.
- D. Nothing contained in this document should be read or interpreted to contradict relevant laws and regulations that may apply. If any provision should contradict such laws and/or regulations, the most restrictive laws and/or regulations shall prevail.

II. DEFINITIONS

- A. **Pesticide:** A "Pesticide" is any chemical or biotic agent used or intended for use for pest control, or any chemical or microbial agent that is being used with the intent of testing in any field test. Pesticide includes any substance, or mixture of substances which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest which may infest or be detrimental to vegetation, humans, animals, or households, or be present in any agricultural or nonagricultural environment whatsoever.
- B. **Experimental Pesticide:** Includes new formulations of existing products, new products containing old active ingredients, or applications to any crop or site not on the California-registered label, or the use of any spray adjuvant not registered in California.
- C. **Experimental Pesticide Use:** Experimental pesticide applications are made for research purposes only, and no pest control benefit is intended or expected. Such applications must conform to State and Federal guidelines. For example, under 40 Code of Federal Regulations (CFR) 172.3, field trials on a total area of no more than 10 acres per pest will not require a federal experimental use permit. Uses which are registered with U.S. EPA but which are still experimental in California must conform

to a guideline of 100 acres per crop.

1. An experimental pesticide use is any pesticide application made either:
 - In the absence of a California-registered label for the compound, substance, or product, or
 - In conflict with the California-registered label for the product being tested.
2. Some uses that are not considered to be in conflict with the label are listed in the 3CCR section 6000. These include applications at lower than label rates, less frequent application intervals, tank mixes (unless specifically prohibited on the label), and use against pests not listed or prohibited on the label, provided all other label directions are followed.

D. Employee of the University of California:

1. For purposes of this policy, an "employee" of the University of California shall be defined as any person whose current UC position description or Agricultural Experiment Station project description or appointment includes responsibilities for pest management research and demonstration.
2. Students who receive compensation of any type (e.g., wages, course credit, tuition remission) are considered employees.
3. For purposes of this definition, retirees are not employees of the UC unless:
 - They are working under an approved emeritus workplan, or
 - They are currently working on an official recall to active service
4. For purposes of this policy, volunteers are not employees of the UC

E. Supervisor: For purposes of this policy, "supervisor" shall be defined as an employee of UC working as a researcher, project leader, Principal Investigator or designated representative responsible for execution of any pesticide research project, employee training, or pest control procedure.

F. University Property: For purposes of this policy, "University property" is land owned or controlled by UC and includes only property over which UC maintains day-to-day control to such an extent that a reasonable presumption can be made that experimentally treated commodities will not be harvested or removed from the premises without authorization of the supervisor. Property under the day-to-day control of individuals and institutions other than the UC is not included in this definition.

G. Pesticide Research and Pesticides Used for Experimentation: "Research" using pest control chemicals can consist of either experimental pesticide applications, or applications made strictly in accordance with California registered labels, or both. If experimental pesticide uses are involved, the use must follow either this policy or the requirements and procedures of the DPR Research Authorization Program.

H. Pest Control: Pesticide applications that are made for pest control purposes rather than research purposes cannot be experimental and must be made in accordance with California-registered labels and all applicable laws and regulations.

- I. **Destroyed:** "Destroyed" means rendered unfit for utilization as human or animal food or feed.
- J. **Tolerance:** "Tolerance" is the maximum pesticide residue level that can legally remain on a commodity at the time of harvest, as defined in Title 40 Code of Federal Regulations, Part 180.
- K. **Field Test:** "Field Test" means pesticide experimentation outside of the research laboratory or research greenhouse. Pesticide use in the research laboratory or research greenhouse should be conducted in accordance with a chemical hygiene plan.

III. POLICY TEXT

Responsibilities Incurred by UC Employees When Experimenting with Pesticides Outside of the Research Laboratory

A. General

1. Supervisor Responsibilities

It is the duty of UC and the supervisor to provide a safe work environment and provide training to persons working under their direction. Training must include information on pesticide hazards and safety as well as laws and regulations applicable to all activities they may perform. The supervisor is responsible for ensuring that pesticides are used in accordance with State and Federal laws, regulations, and label requirements. Supervisors shall make their employees aware of the hazards of the chemicals and pesticides being used for experimentation prior to any handling of these substances or coming into contact with surfaces treated with these substances. Supervisors shall use the training requirements in the California Code of Regulations (Sections 6724 and 6764) as a guide to employee training. In the absence of a registered label, supervisors shall use the Safety Data Sheet as a guide to pesticide-specific training and personal protective equipment requirements.

B. Safety Requirements

1. Entry after Application

No person shall enter any area treated with a pesticide unless he or she follows the labeling directions for entry activities. State reentry regulations may be more restrictive than those stated on the label (reference 3CCR section 6772). In all cases the most restrictive reentry regulations shall be followed.

For entry in the absence of a label or labeling, the following conditions must be met:

- a. **Agricultural Sites.** Do not enter treated areas for 4 hours after application unless protected (as per below item III. B. 3). Review Section 2 of the Safety Data Sheet (Hazards Identification) to determine if the hazards of the pesticide application indicate that 4 hours of entry restriction is not sufficient. After entry restriction period, anyone entering the area must wear shoes and socks, a long sleeved shirt, and long pants.

- b. Non-agricultural and Urban Areas. Persons shall not enter areas treated with liquid formulations for 2 hours after application and until the treated area has dried. When using baits, dusts and other dry formulations, persons should not enter the area during the application or until the dust has settled. Standard industry care and practice should be observed.

2. Posting Treated Plots

- a. Agricultural Sites. To ensure the safety of persons entering an area treated with experimental pesticides, the treated area shall be posted in accordance with any applicable pesticide label and 3 CCR section 6776.
- b. Non-agricultural and Urban Areas. The owners or residents of the treated property shall be provided with a notification of treatment indicating the nature of the treatment, time and date of treatment, and any special instructions regarding re-entry or use after treatment.
- c. In plots treated with materials requiring restricted entry intervals under 3CCR section 6772, re-entry intervals must be posted.

3. Personal Protective Equipment (PPE) for Unregistered Pesticides

Refer to 3CCR section 6738 for general guidelines and requirements for PPE and section 6739 for guidelines and requirements for respiratory protection. In the absence of a registered pesticide label, the following minimum requirements shall apply. Refer to Section 2 of the Safety Data Sheet (Hazards Identification) to determine if the pesticide is equivalent to Category I.

- a. Equivalent to Category I for eye or skin damage. Employees handling these pesticides must wear coveralls over long sleeved shirt and long pants, protective eyewear, chemical resistant gloves, socks, and chemical resistant footwear.
- b. Equivalent to Category I for systemic toxicity. Employees handling these pesticides must wear respiratory protection, long sleeved shirt, long pants, protective eyewear, chemical resistant gloves, socks, and closed toed shoes.
- c. When mixing and loading unregistered pesticides equivalent to Category 1, use a chemical resistant apron and a face shield for extra protection.

4. Unidentified or Unlabeled Pesticides

Pesticides of unknown toxicity shall be stored, transported, handled, and disposed of according to the standards established by State and County regulations for Category I Pesticides.

C. Environmental Considerations in Determining Plot Locations

- 1. The supervisor shall consider the potential consequences of any proposed experimental use of pesticides, paying particular attention to proximity to:
 - a. Areas of frequent human activity or habitation
 - b. Bodies or sources of water
 - c. Wildlife management areas

- d. Critical habitats of rare or endangered species
 - e. Livestock and crops
2. All research applications will be made in a way that minimizes adverse environmental impacts.

D. Pesticide Use Record-Keeping and Reporting

1. For each experimental pesticide application, the supervisor shall keep a record of:
 - a. Location of site
 - b. Plot size and total area treated
 - c. Each commodity, crop, or site treated
 - d. Pest species of concern
 - e. Pesticides applied
 - f. Date of application
 - g. Application method
 - h. Concentration and volume of pesticide applied
 - i. Date commodity was destroyed (when required)
 - j. Name of grower, where applicable.
2. The records shall be retained by the supervisor, the supervisor's campus departmental office, Research and Extension Center or the appropriate county Cooperative Extension office for at least two years after the final pesticide application. Such records shall be made available upon request to the county agricultural commissioner or DPR.
3. Pesticide use reports must be submitted to the County Agricultural Commissioner.
 - a. Uses on UC controlled property shall be reported on the appropriate report.
 - b. Uses on cooperator property shall be provided to the cooperator for reporting either site name or as "research commodity."

E. Crop Control, Disposition, and Destruct Notification Requirements for Treated Commodities

1. Under State and Federal law, commodities treated with any experimental pesticide for which there is no pesticide residue tolerance or tolerance exemption cannot enter the channels of trade or in any way be made available for use as a human or animal food or feed.
2. The supervisor has primary responsibility to ensure that the treated commodity is posted and destroyed.
3. Any site treated with an experimental pesticide on a commodity for which no pesticide residue tolerance, or exemption from tolerance, has been established shall comply with the following requirements:

- a. Prior to the application, a sign shall be posted at each corner of the experimental plot with the words, "Commodity treated with experimental pesticide, do not harvest." The signs shall be in English and Spanish, and of a size so the wording is readable to a person with normal vision, from a distance of 25 feet. Signs will remain in place until treated crop is destroyed.
 - b. All parts of the treated commodity potentially suitable for use as human or animal food or feed and not removed from the site for research purposes shall be destroyed.
4. Pesticide Application and Notification Requirements for Trials Conducted Off UC Property
 - a. At least 24 hours prior to commencement of any experimental pesticide trial on property not owned or controlled by UC, the supervisor shall submit to the county agricultural commissioner and grower a copy of a document (see Appendix I) that shall include the following information:
 - i. Supervisor name, address, phone number and date of report
 - ii. Qualified Applicator Certificate Number
 - iii. Experimental pesticide to be applied and U.S. EPA Registration number, if applicable. If the U.S. EPA number is not available, use the chemical name or experimental number from the Safety Data Sheet
 - iv. Location of experimental trial (grower or ranch name address and site identification number)
 - v. Size of trial (acres or rows)
 - vi. Commodity or site to be treated
 - vii. Anticipated date of first and last applications
 - viii. Intended disposition of treated crop (harvest or destruction)
 - ix. Date of anticipated harvest or destruction of the treated commodity if applicable
 - x. Signature of supervisor responsible for the application and crop destruction.
5. Pesticide Application and Notification Requirements for Trials Conducted at Research and Extension Centers (see Research and Extension Center Policy and Procedures: *Experimental Use of Pesticides*).
 - a. All experimental use of pesticides at a Research and Extension Center (REC) shall be approved by the Research Advisory Committee as part of the REC's project approval process (see Administrative Handbook Section 580).
 - b. All experimental use of pesticides at a REC shall be reported to the REC Superintendent in writing at least 48 hours prior to application.
 - c. Experimental use application shall be documented by the party (Project Leader or REC) responsible for application. Written documentation shall be

submitted to REC Superintendent within 24 hours of application.

- d. Destruction of crops shall be documented in writing to the REC Superintendent.
6. In the event a treated commodity is harvested and potentially made available for human or animal consumption where no pesticide residue tolerance exists, or where the residue is likely to be in excess of the tolerance, persons conducting the research shall immediately notify the County Agricultural Commissioner, the grower, and UC ANR Risk & Safety Services. UC Cooperative Extension (CE) Specialists and AES faculty shall notify the Department Chair. CE Advisors shall notify the County Director. Project Leaders working at a REC shall notify the Center Director. Chairs, County Directors, or Center Directors will then notify appropriate Deans or Regional Directors.
7. Food or feed treated with pesticides registered for application on the test site and applied at or below the registered label rates may be harvested and allowed to enter the food marketing chain, provided all other label and State regulatory conditions are met.

F. Microbial Pesticides

1. The U.S. Environmental Protection Agency generally requires a notification or a federal experimental use permit for any experimental program involving the deliberate release into the environment of living, genetically engineered microbial pesticides, irrespective of the acreage involved in the experiment (see 40 CFR sec. 172.45 for exemptions).
2. The DPR Pesticide Registration Branch must also be notified of any proposed field testing (on or off UC property) by UC personnel involving genetically engineered microbial pesticides.

IV. COMPLIANCE / RESPONSIBILITIES

Requirements of Selected California Pesticide Laws, Regulations and UC ANR Policies Not Specifically Related to Experimental Use

A. Employee Rights

Employees who handle pesticides or come into contact with treated areas or surfaces have rights under 3CCR, section 6704.

B. Qualifications of Persons Supervising Pesticide Applications

Persons directly supervising pesticide applications shall hold the Qualified Applicator Certificate (QAC) in the appropriate category for the research being performed. It is recommended that employees whose responsibilities include applying pesticides be certified as a Qualified Applicator (QAC).

C. Storage, Transportation, and Disposal of Pesticides

1. General Requirement, 3CCR section 6670
2. Storage and Delivery

- a. The supervisor is responsible for all containers or equipment on the work site that hold or have held a pesticide. The supervisor shall either:
 - i. Store all containers or equipment in a locked enclosure, or
 - ii. Provide a responsible person to maintain control over the containers at all times.
 - iii. When not being used, all pesticide containers (regardless of the amount of pesticide they contain) shall have lids and closures securely fastened.
 - iv. Pesticides shall not be delivered to any property unless they are stored or controlled as required above.

3. Posting of Pesticide Storage Areas, 3CCR, section 6674
4. Container Requirements, 3CCR section 6676
5. Service Container Labeling, 3CCR section 6678
6. Prohibited Containers for Pesticides, 3CCR section 6680
7. Transportation 3CCR section 6682
8. Rinse and Drain Procedures, 3CCR section 6684
9. Pesticide Disposal

All undiluted, excess pesticides will be disposed of in accordance with State and Federal laws and regulations, or in accordance with the requirements stated on the label.

10. Unregistered Pesticides

All experimental and unregistered pesticide chemicals shall be stored and transported in labeled containers of a type appropriate to assure safety in handling.

D. Safety Considerations During Applications

1. Personal Safety

To ensure safe work practices for employee who mix, load, apply, store, or otherwise handle pesticides, or who are exposed to residues of pesticides after application, the following work practices and safety requirements shall be met:

- a. Minimum Age Requirements, 3CCR section 6722
- b. Instruction and training.
 - i. The supervisor shall provide training for each employee handling pesticides. This training shall conform with 3CCR section 6724 (Handler Training).
 - ii. The supervisor shall provide training for each employee performing cultural activities in a treated field. This training shall conform with 3CCR section 6764 (Fieldworker Training).

c. Emergency Medical Care.

The supervisor shall make prior arrangements for emergency medical care as required by 3CCR sections 6726 and 6766.

d. Medical Supervision, 3CCR section 6728.

e. Other general pesticide use and handling requirements. The supervisor shall meet the requirements of state regulations for:

- i. Work clothing, 3CCR section 6000 (Definitions)
- ii. Availability of labeling, 3CCR section 6602. In the absence of a registered label, a Safety Data Sheet for each pesticide shall be available at each use site.
- iii. Wellhead Protection, 3CCR section 6609.
- iv. Backflow Prevention, 3CCR section 6610.
- v. Protection of Persons, Animals, and Property, 3CCR section 6614.
- vi. Working Alone, 3CCR section 6730.
- vii. Change Area, 3CCR section 6732.
- viii. Handler Decontamination Facilities, 3CCR section 6734.
- ix. Personal Protective Equipment, 3CCR section 6738.
- x. Respiratory Protection, 3CCR section 6739.
- xi. Adequate Light, 3CCR section 6740.
- xii. Safe Equipment, 3CCR section 6742.
- xiii. Equipment Maintenance, 3CCR section 6744.
- xiv. Closed Pesticide Mixing Systems, 3CCR section 6746
- xv. Fieldworker Decontamination Facilities, 3CCR section 6768.

B. Restricted Materials Permit

1. In accordance with State law and regulations, employees of UC must possess (or be operating under) a restricted materials permit when possessing, using, or applying any restricted material for pest control purposes.
2. The potential groundwater contaminating chemicals listed in 3 CCR 6800(a) may be applied for research or experimental purposes only pursuant to a valid research authorization (3 CCR 6416). The applicant must identify the location of the research or experimental site with the research authorization request. The UC research exemption from the requirement for a Research Authorization (3 CCR 6268) does not apply when these potentially groundwater polluting chemicals are used for research or experimental purposes.
3. Under 3 CCR, Section 6414(d), Permit Exemptions, except as described in E.,2., above no permit is required for restricted materials used only for experimental or research purposes, when possessed or used by or under the supervision of

research personnel from colleges provided the college or university has a policy covering experimental pesticide use which has been approved by the Director, DPR.

C. Pesticide Guidelines, Recommendations, and Research Results

1. UC ANR peer reviewed published pesticide guidelines shall conform to usage prescribed by labels registered by the U.S. Environmental Protection Agency and DPR and must be reviewed by Office of Pesticide Information and Coordination (OPIC), UC ANR. See also Section 285 of the UC ANR Policy and Procedure Manual.
2. Pesticide use recommendations shall conform to usage prescribed by labels registered by the U.S. Environmental Protection Agency and DPR and must be made in writing.
 - a. According to State law, recommendation means the giving of any instruction or advice on any agricultural use as to any particular application on any particular piece of property.
 - b. A person making a written recommendation does not incur an obligation to ensure that the actual use follows his or her recommendation.
 - c. Under State law, no person shall act as an agricultural pest control adviser without first having secured an agricultural pest control adviser license. However, UC personnel engaged in official duties relating to agricultural use are exempt from the requirement for an agricultural pest control advisor license, provided that any recommendation by any such person as to any particular application on any particular piece of property shall be in writing.
 - d. According to State law, a written recommendation is required when UC personnel are engaged in official duties relating to agricultural use (of pesticides) and when they give any instruction or advice on a particular application on a particular piece of property.
 - e. UC employees exempt from the PCA license requirements who are familiar with the property and are in doubt as to whether or not a written recommendation is needed should write a recommendation. Those who are in doubt whether or not they are familiar with the property should either visit the property or state that their knowledge of the property is not adequate to make a pesticide use recommendation for that particular property.
 - f. Written pesticide recommendations should identify pesticides by official common name; when necessary, brand names may be used (UC/DPR agreement).
3. Published or otherwise presented results, descriptions and demonstrations of experiments in which pesticides are used in a manner that does not conform with registered uses shall be clearly identified as experimental results only. Where appropriate, a warning shall be included that similar uses may result in contaminated crops with illegal pesticide residues.

V. PROCEDURES

- A.** This policy on experimental pesticide use applies to all employees of UC ANR who use or handle pesticides for experimental purposes. This policy applies to experimentation with pesticides or related substances (or mixtures of substances) in any field test or field demonstration.
- B.** This policy applies to experimental pesticide research, on any campus, field station, agricultural research and extension center, and on any other land or treated site (including livestock) when used in experimental pesticide research field trials and demonstration operations that are activities of UC. Noncompliance with this policy will result in the loss of the exemption provided under Title 3 CCR, Section 6268, and may be deemed to be a violation of Section 6260.
- C.** This policy does not include the use of a registered pesticide with the intent to provide pest control according to the pesticide label and where the pesticide is not being used as an integral part of research.

VI. RELATED INFORMATION

- [California Code of Regulations: Title 3, Division 6 \(3 CCR\)](#)
- [The Food and Agricultural Code \(FAC\)](#)
- [California Code of Regulations: Title 16, Division 19](#)
- [Department of Pesticide Regulation Pesticide Safety Information Series](#)
- [Code of Federal Regulations, Title 40, Parts 150 to 189](#)
- [California Department of Pesticide Regulation](#)
- [UC ANR Policy and Procedure Manual Section 285, Publications](#)
- [UC ANR Policy and Procedure Manual Section 580, Research and Extension Centers](#)
- [Appendix I, Pesticide Application and Notification Requirements for Trials Conducted Off University Property](#)

VII. FREQUENTLY ASKED QUESTIONS

Not used.

VIII. REVISION HISTORY

October 2017:

Updated format.

September 2020:

Content updated, title references updated, links added/corrected.