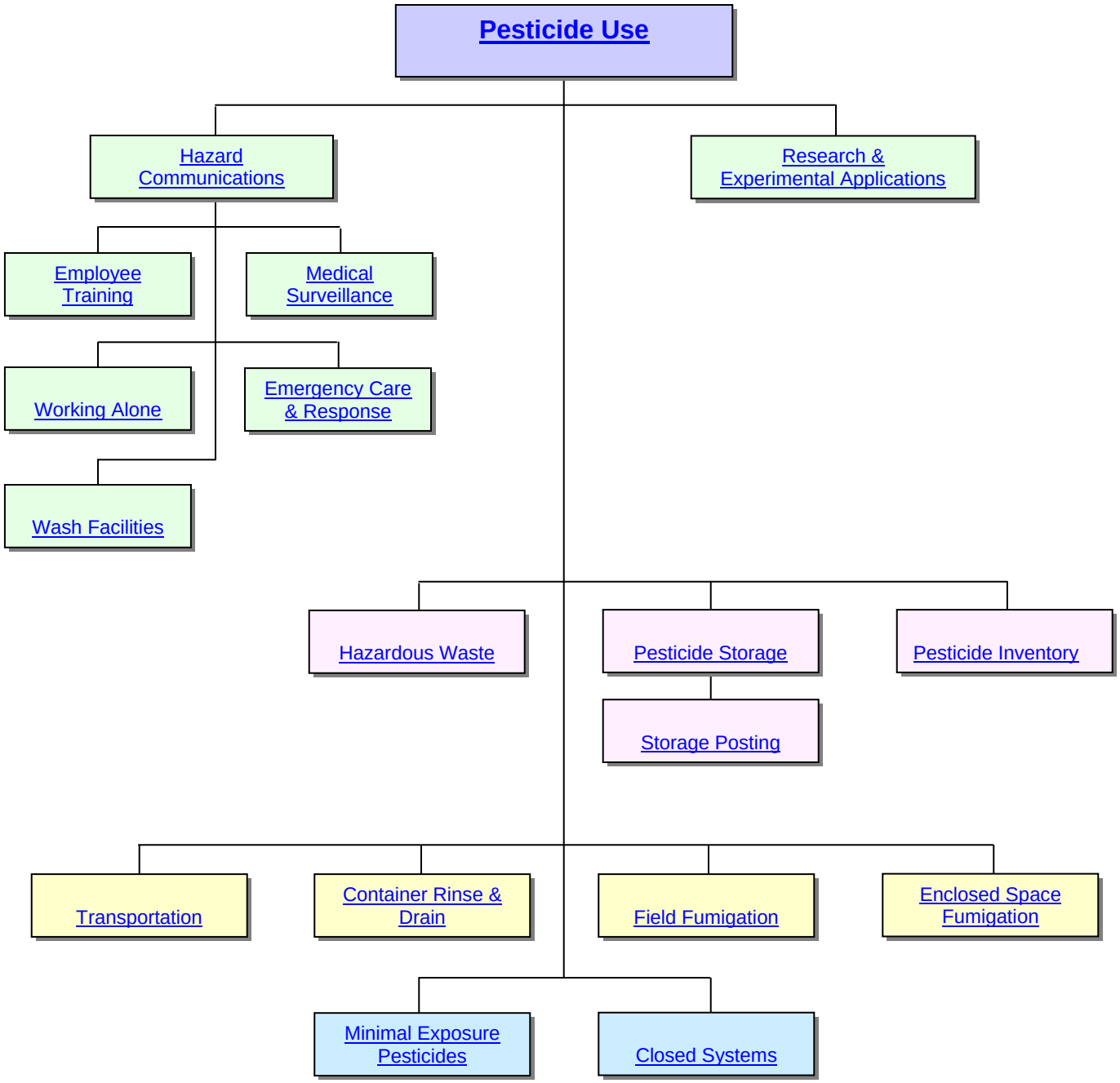
PESTICIDE USE AND HANDLING



AGRICULTURE AND NATURAL RESOURCES
RESEARCH AND EXTENSION CENTER SYSTEM
POLICY AND PROCEDURES

PESTICIDE USE AND HANDLING

TABLE OF CONTENTS

ATTACHMENTS

Attachment A - Pesticide Use and Handling Flow Chart

Attachment B - Daily Pesticide Use Record

Attachment C - Monthly Pesticide Use Report for Production Agriculture

Attachment D - Monthly Summary Pesticide Use Report

Attachment E - Pest Control Application Information Form

Attachment F - DANR Hazard Communication Program - 11/18/99

Attachment G - Pesticide Safety Training Record Form

Attachment H - EH&S Safety Net #39: Safety Training Tips

Attachment I - Medical Supervision Written Statement

Attachment J - Medical Surveillance-Pesticide Use Form

Attachment K - Employees Statement of Medical Condition/ Physician's Report of Medical Evaluation

Attachment L - Chemical Waste Contents Label

Attachment M - Empty Pesticide Container Disposal Form

Attachment N - EH&S Safety Net #38: Guidelines for Pesticide Retention & Disposal

Attachment O - EH&S Safety Net #49: Pesticide Storage

Attachment P - REC AO Container Labeling/Inventory Requirements

APPENDICES

PESTICIDE SAFETY INFORMATION SERIES

Appendix	Language		Description
A-1	English	Spanish	Safety Requirements for Pesticide Handlers in Agricultural Settings, Revised 9/20/98
A-2	English	Spanish	Pesticide Storage, Transportation and Disposal in Agricultural Settings, Revised 9/20/98
A-3	English	Spanish	Engineering Controls in Agricultural Settings (Closed System, Enclosed Cabs, Water Soluble Packaging), Revised 9/20/98
A-4	English	Spanish	First Aid and Decontamination in Agricultural Settings, Revised 9/20/98
A-5	English	Spanish	Respiratory Protection in Agricultural Settings, Revised 9/20/98
A-6	English	Spanish	Summary of Worker Safety Regulations for the Agricultural Setting, Revised 9/20/98
A-7	English	Spanish	Laundering of Pesticide Contaminated Clothing Following Exposure to Agricultural Pesticides, Revised 9/20/98
A-8	English	Spanish	Hazard Communication Information for Employees Handling Pesticide in Agricultural Settings, Revised 10/02
A-9	English	Spanish	Hazard Communication Information for Employers with Employees Working in Agricultural Fields, Revised 10/02
A-10	English	Spanish	Minimal Exposure Pesticides in Agricultural Settings, Revised 9/20/98
A-11	English	Spanish	Medical Supervision, Revised 9/20/98

PESTICIDE USE AND HANDLING

I. INTRODUCTION

As part of farming activities, pesticides are routinely applied at Research and Extension Centers (RECs) to control a variety of detrimental plants, animals, and microbes. Certain pesticides may pose a threat to the well being of people, domestic animals, wildlife, and/or the environment. In order to prevent or minimize adverse impacts associated with the use and handling of pesticides, the State of California administers a regulatory program through the Department of Pesticide Regulation (DPR).

II. POLICY

REC Administrative Office (AO) and RECs are committed to protecting the health and safety of employees and the public and preventing adverse impacts to domestic animals, wildlife, and the environment at all facilities. Accordingly, personnel from REC AO and RECs have cooperatively implemented a program to maintain compliance with the state regulatory program for pesticide use and handling.

III. SCOPE

As encompassed by the state regulatory program, RECs are required to establish policies and procedures to protect employees and other entities, and resources from the hazards associated with pesticide use and handling in both crop and noncrop settings.

IV. PURPOSE

The purpose of this Policy and Procedures is to identify methods for properly mixing, applying, transporting, and storing pesticides, including requirements for employee training and medical surveillance, hazard communication, and personal protective equipment.

V. DEFINITIONS

CAC:	County Agricultural Commissioner.
Carbamates:	Esters of N-methyl carbamic acid which inhibit cholinesterase.
CCR:	California Code of Regulations.
CMSPU Report:	California Monthly Summary Pesticide Use Report

EH&S	Environmental Health and Safety, Agriculture and Natural Resources (ANR) REC AO.
Employee:	A person hired by the employer or his agent (agent may include a labor contractor).
Employer:	A person who hires an employee and may include: (1) the operator of the property, (2) a labor contractor, (3) a pest control operator, (4) any other contractor, or (5) the employer's agent.
EUP:	Experimental Use Permit
Field:	Any area (including a greenhouse) upon which one or more crops are commercially grown.
Handle:	Mixing, loading, or applying pesticides or maintaining, servicing, repairing, or cleaning contaminated equipment.
HSC:	Health and Safety Code (California)
NIOSH:	National Institute of Occupational Health and Safety
NOI:	Notice of Intent
Operator of the Property:	Any person(s), such as superintendents, primarily responsible for the control or management of the property.
Organophosphates:	Organophosphorus esters which inhibit cholinesterase.
Pesticide:	Pesticides, as defined by the FIFRA Act are "...any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, or weeds or any other forms of life declared to be pests; and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant."
PEL:	Permissible Exposure Limit
PSIS:	Pesticide Safety Information Series
Protective Clothing:	Clothing which minimizes human body contact with pesticides and is separate from or in addition to normal wearing apparel. Protective clothing may include, but it not limited to, work clothing, chemical-resistant boots, gloves, hats, and chemical-resistant aprons.

Qualified Applicator Certificate Holder: A person who has qualified in one or more pest control categories to supervise pesticide applications, but is not entitled to supervise the operations of a pest control business.

Qualified Applicator License: A person who is qualified, by examination in one or more pest control categories, to supervise the pesticide applications made by a licensed pest control business.

Regularly Handled: Any employee handling pesticides (including mechanic who works on unwashed equipment) during any part of the day for more than six calendar days in any qualifying consecutive 30-day period beginning on the first day of handling (e.g., handling a pesticide for one hour during a work day constitutes one full day). Any day spent mixing or loading pesticides while exclusively using a closed system or mixing only pesticides sealed in water-soluble packets is not included.

Work Clothing: A long-sleeved shirt and long-legged trousers or a coverall-type garment, all of closely woven fabric or equivalent covering the body, including arms and legs. The clothing need not cover the head, hands, or feet.

VI. PESTICIDE USE

A. Application Notices (CCR, Title 3, Sections 6618 and 6619)

1. Each person performing pest control shall give written notice to the REC within 48 hours prior to any pesticide application.

2. The REC shall give notice to all persons known to be or expected to be on the treated property or likely to enter during the period of time that any restrictions on entry are in effect.

3. An agricultural pest control business applying pesticides for the production of an agricultural commodity shall give notice to the REC (or the REC's designee), within 24 hours of completion of the pesticide application.

B. Notice of Intent to Apply Restricted Pesticides (CCR, Title 3, Section 6434)

1. REC staff and researchers shall complete and submit to the REC designated person an NOI 48 hours prior to any restricted pesticide application (NOI forms are available from the local CAC). The REC shall forward the NOI to the CAC 24 hours prior to application. An NOI containing the below information must be on file with the REC and CAC before application can be made.

a. Name of department and individual authorizing application of materials.
b. Name of department requesting application of materials.
c. Name of individual applying materials.
d. Telephone number.
e. Applicator certification card number.
f. Name of material to be applied.
g. Amount of material to be applied.
h. Date and specific time of anticipated application.
i. Specific location of application.
j. Township, range, section.
k. Commodity and acreage.
l. Rate of application per unit area.
m. Method of application.
n. Pest to be controlled.
o. Notice of beginning date.
p. Notice of intent.
q. Estimated length of time.

2. Within seven days of pesticide application, for which an NOI was submitted, a report of pesticide use shall be submitted to the CAC. (This report is part of the initial NOI form.)

C. Operator Identification Numbers (CCR, Title 3, Section 6622)

1. Prior to the purchase and use of pesticide(s), the REC shall obtain an operator identification number from their representative CAC.

2. When commercial applicators are used, this number shall be provided to the commercial applicator.

D. Site Identification Numbers (CCR, Title 3, Section 6623)

1. Prior to the use of pesticide(s), the REC shall obtain a site identification number from their representative CAC for each site where pest control work shall be performed.

2. The site identification number shall be valid for the same, concurrent, period of time as the operator identification number.

E. Pesticide Use Records (CCR, Title 3, Section 6624)

1. Any employee who uses a pesticide for an agricultural use other than livestock is required to maintain records of pesticide use (Attachment B). Records shall include the following information for each pest control operation:

a. Date of application;
b. Name of the operator of the property treated;
c. Location of the property treated;
d. Crop commodity, or site treated;

e. Total acreage or units treated at site;
f. Name of the pesticide, including the EPA or state registration number which is on the pesticide label; and
g. Amount of pesticide used on the specific commodity or site.

2. In addition to the information above, the REC which is producing an agricultural commodity shall include in their records the following information for each pest control operation:

a. Location of the property treated, by county, section, township, range, base, and meridian;
b. Hour the treatment was completed;
c. Operator identification number;
d. Site identification number;
e. Total acreage planted or units at the site; and
f. Name or identity of the person(s) who made and supervised the application.

3. The REC which is producing an agricultural commodity shall maintain records of pesticides applied by an agricultural pest control business.

4. Pesticide use records shall be retained for two years.

F. Pesticide Use Reports for Production Agriculture (CCR, Title 3, Section 6626)

1. Each REC shall report the use of pesticides applied to crops, commodities, or sites to their representative CAC.

2. The Pesticide Use Report (Attachment C) shall be hand delivered or mailed by the 10th of the month following the month in which the pesticides were applied. Unless required by the county, this form is to be used only for crops or commodity applications.

3. Pesticide Use Reports shall be retained for two years.

G. Monthly Summary Pesticide Use Reports (CCR, Title 3, Section 6627)

1. Except as provided in Paragraph VI.F. above, each REC shall prepare a Monthly Summary Pesticide Use Report (Attachment D) for all pesticides (excluding experimental products) used on the REC, including pesticides applied by individual researchers.

2. The Monthly Summary Pesticide Use Report (Attachment D) shall be forwarded to the CAC by the 10th of the month following pesticide application. Each REC shall maintain a permanent file for all pesticide applications.

3. The report shall include the following information:

    a. Name and address of the REC including the name of the person responsible for the report;
    b. County where the pest control was performed;
    c. Month and year of pesticide use;
    d. REC or commercial applicator license number;
    e. REC Restricted Material Permit number;
    f. On Attachment D, complete columns A, B, C, and D for all uses of pesticides; and
    g. On Attachment D, complete columns E and F (column E - for greenhouse applications, insert the word greenhouse and for Column F - for greenhouse applications insert the square footage treated).

4. If the county in which the work was performed has no CAC, the report shall be forwarded to the Director, California EPA Pesticide Enforcement.

H. Accountability (CCR, Title 3, Section 6530)

1. University of California (UC) personnel engaged in official duties relating to the agricultural use of pesticides on UC property are exempt from the need to secure an agricultural pest control advisor license.

2. A Qualified Applicator Certificate is required for all UC personnel supervising others applying pesticides and applying restricted materials.

3. Each qualified applicator is required to complete a minimum of 20 hours of approved continuing education relating to pest management and pesticides, including not less than four hours pertaining to pesticide laws and regulations.

I. Pest Control Recommendations

1. The responsible person (Superintendent, Principal Superintendent of Agriculture, or researcher) is required to complete a Pest Control Application Information form (Attachment E) prior to all applications of a pesticide including restricted materials. This form can also satisfy the requirement for application notification described in Paragraph VI.A.

2. The application information shall be discussed with the applicator prior to application of the pesticide.

    a. Special attention should be paid to recording the necessity of posting the area/site, work re-entry period, discussion of alternative control measures, dates of application, and completion of the application.

    b. A single form shall be allowed if the pesticide, application rate, and pest target are the same for numerous applications.

c. The Pest Control Application Information forms shall be maintained on file for one year by the REC, responsible person, and employee applying the material.

J. Greenhouse Pesticide Applications

1. Pesticide dilutions should only be prepared in the amount needed for the area to be treated.

2. All regulations that apply to field operations also apply to greenhouses.

3. All precautions including PPE are required when spraying Category I and Category II pesticides.

VII. RESEARCH AND EXPERIMENTAL APPLICATIONS

A. With few exceptions, pesticide laws, regulations, and policies apply to all materials both registered and unregistered that are used for research and experimentation.

B. Experiments and demonstrations of pesticides on property owned (or controlled) by RECs are governed by directives presented in Experimental Use of Pesticides Policy and Procedures.

C. Microbial Pesticides

1. The United States Environmental Protection Agency requires a federal EUP for any experimental program involving the deliberate release of living, non-indigenous, or genetically altered microbial pesticides, irrespective of the acreage involved.

2. The CDFA must be notified of any experimental program (located on or off REC property) involving the deliberate release of living, non-indigenous, or genetically altered microbial pesticides.

D. All UC and private personnel working with pesticides at any REC must conform to Agriculture and Natural Resources Administrative Handbook, Section 281 and Section 580 (on file at each REC) and applicable REC Policies and Procedures.

VIII. HAZARD COMMUNICATION FOR PESTICIDE HANDLERS AND FIELD WORKERS (CCR, Title 3, Sections 6723 and 6761, and ANR HCP-8/8/88)

A. Before employees will be allowed to handle pesticides or enter treated fields, the REC:

1. Shall post and maintain a copy of a completed Written Hazard Communication Program for Employees Handling Pesticides (Appendix A-8/handlers or Appendix A-9/field workers) in a prominent location where the employee usually starts the work day. (Appendix A-6).

2. Upon request, provide the employee the opportunity to have the information given in Appendix A-8 or Appendix A-9 read to them in a language they understand.

B. The REC shall maintain, at a central workplace location which is accessible to employees who handle pesticides, the following documents:

1. Pesticide Use and Handling Policy and Procedures;
2. Pesticide Use Record (Attachment B);
3. Appendix A-8 and Appendix A-9 which are applicable to the pesticide and handling activities listed in the Pesticide Use Records;
4. Material Safety Data Sheets (MSDSs) for each pesticide listed in the Pesticide Use Records; and
5. DANR Hazard Communication Program - 8/8/88 (Attachment F).

C. The REC shall inform employees or labor contractor (if applicable) before they are allowed to handle pesticides and at least annually thereafter, of the location and availability of the records and other documents listed above which relate to training, monitoring, and potential exposure.

IX. EMPLOYEE TRAINING (CCR, Title 3, Sections 6511, 6530 and 6724)

A. The REC shall have a written training program for employees who handle pesticides.

B. Each employee must be trained prior to the use of any pesticide, regardless of the toxicity category, and will receive review training annually thereafter. The REC or labor contractor must provide training (Appendix A-1 and Appendix A-2) so that each employee handling pesticides understands the following for each pesticide used:

1. Immediate and long-term hazards involved;
2. Proper safety procedures to be followed;
3. Clothing and protective equipment to be used;
4. Common symptoms of pesticide poisoning and the ways poisoning can occur;
5. Where to obtain emergency medical treatment;
6. Purpose and requirements of medical supervision if organophosphates or carbamates are handled;
7. Applicable laws, regulations, MSDS, PSIS, and label requirements;
8. The need for immediate decontamination of skin and eyes when exposure occurs;
9. Special training necessary for employees handling and applying restricted use materials such as phostoxin, methyl bromide, or oxydemeton-methyl (Metasystox-R); and

10. Special precautions for handling, applying, mixing, and loading sodium arsenite when used as a pesticide in grape vineyards.

C. Supervisors must be familiar with the necessary precautions and permits necessary to apply restricted materials, including being aware that when restricted materials are used in toxicity Category I or II, medical surveillance may be necessary as described in Paragraph X, Medical Surveillance.

D. All training, regardless of length, shall be recorded on the Pesticide Safety Training Form (Attachment G).

1. The training shall be verified with the employee's, employer's, and trainer's signatures.

2. Training records shall be kept with either the REC training file or the employee's personnel file.

3. Training records shall be retained for a minimum of three years.

E. UC Davis Policy and Procedure Manual, Section 290-27, and federal and state regulations state that:

1. Supervisors (including faculty) are responsible for overseeing that University employees and students are aware of potential workplace hazards and the necessary protective measures that should be taken.

2. Attachment H entitled Safety Training Tips notes that the employee may know more about the subject matter than the supervisor. If this is the case, authority may be delegated to that employee authorizing them to train others.

3. Supervisors should be aware that they are responsible for ensuring employee training is performed properly and meets current standards.

X. MEDICAL SURVEILLANCE (CCR, Title 3, Section 6728)

A. Whenever an employee handles a pesticide in toxicity Category I or II that contains an organophosphate or carbamate, the REC shall maintain use records that will:

1. Identify the employee;
2. Name the pesticide;
3. List the date of application; and
4. Duration of application.

B. Each REC shall have a Medical Supervision Written Agreement form (Attachment I) signed by the Superintendent and a licensed physician stating that he/she has agreed to provide medical supervision and that he/she possesses a copy and understands the document entitled Medical Supervision of Pesticide Workers Guidelines for Physicians (Appendix A-11).

1. Copies of the signed agreement shall be forwarded to REC AO and CAC no later than when any of the REC's employees begin to regularly handle the above types of pesticides described under Paragraph X.A.

2. Prior to entering into agreement with a physician, each REC shall contact REC AO to receive guidance in the proper procedures for deriving the Medical Supervision Written Agreement.

C. All employees who anticipate handling organophosphates or carbamates shall have a baseline red cell and plasma cholinesterase determination 30 days prior to working or handling cholinesterase-inhibiting pesticides.

1. Baseline values shall be verified every two years.

2. Additional requirements are listed in the regulations pertaining to employees not previously under medical supervision who are required to handle such pesticides.

D. If an employee applies or handles carbamate or organophosphate pesticides for more than six days in any 30-day period:

1. The monitoring physician may require an additional cholinesterase test within three days after sixth day of exposure.

   Note: Applying and/or handling carbamates or organophosphates for any portion of a workday constitutes a day when calculating the six-day period.

2. Additional testing intervals for employees who regularly handle these pesticides will be set by the monitoring physician.

E. A Medical Surveillance-Pesticide Use form (Attachment J) or equivalent shall be completed by the employee's supervisor when any pesticide (including laboratory and experimental) is handled or used.

1. These records shall be kept on file at the REC for three years.
2. All pesticides used or handled must be reported for each month.
3. A report is not necessary if pesticides are not used or handled.

XI. EMERGENCY MEDICAL CARE/ACCIDENT RESPONSE PLAN (CCR, Title 3, Section 6726)

A. Each REC shall have an Accident Response Plan.

1. The plan shall be available at all mixing and loading locations and/or on-site in a vehicle working in the field.

2. The plan shall include:

   a. Phone number of the REC; and

b. Name, address, and phone number of the nearest facility able to provide emergency medical care.
c. First Aid and Decontamination Information (Appendix A-4).

3. Availability of MSDS information and/or Technical Release Data information for experimental and unregistered materials shall be included in the Accident Response Plan.

a. All accidental exposures due to spills, splashes, equipment failure, etc., shall require immediate evaluation by a medical facility.
b. A copy of the MSDS or Technical Release Data information shall accompany the employee to the medical treatment facility.

XII. WORKING ALONE (CCR, Title 3, Section 6730)

A. Any employee mixing, loading or applying a pesticide in toxicity Category I shall not work alone during daylight hours unless personal, radio, or telephone contact is made to a responsible adult at intervals not exceeding two hours.

B. Any employee mixing, loading or applying a pesticide in toxicity Category I shall not work alone during nighttime hours unless personal, radio, or telephone contact is made to a responsible adult at intervals not exceeding one hour.

XIII. WASHING FACILITIES, PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING (CCR, Title 3, Sections 6734, 6736 and 6738)

A. Washing Facilities (CCR, Title 3, Section 6734)

1. Potable water, soap, and single-use towels for routine hand and face washing, and for emergency washing of the entire body shall be available at the main pesticide storage facility where mixing and/or loading occurs.

2. Clean towels shall be stored to prevent contamination from pesticides.

3. Regulations required that a minimum of 10 gallons of potable water be available for one employee and a minimum of 20 gallons for two or more employees, or a water source within 100 feet of the mix/load site.

B. Work Clothing (CCR, Title 3, Section 6736)

1. Clean work clothing (including disposable coveralls) shall be provided for each employee who handles pesticides in Category I or Category II.

2. Work clothing shall not be worn or taken home for laundering. It is REC AO and REC policy that all work clothing remain at the RECs for laundering. Refer to Appendix A-7 for laundering instructions.

C. Personal Protective Equipment (PPE) (CCR, Title 3, Section 3638 and Respiratory Protection Program Policy and Procedures)

1. Safety Equipment

    a. Necessary safety equipment shall be provided to all employees that handle, mix, and use pesticides.

    b. A designated area shall be provided for cleaning and repairing PPE.

2. Eye Protection

    a. Appropriate eye protection (e.g., safety goggles or face shield) must be worn to safeguard against pesticide exposure when the employee is engaged in handling, mixing, and/or loading pesticides.

    b. Eye protection shall be worn when cleaning, adjusting, or repairing equipment contaminated with a pesticide.

3. Gloves

    a. New or clean impervious gloves (e.g., neoprene, rubber, or other chemical-resistant material) shall be worn when engaged in handling, mixing, and/or loading Category I or Category II pesticides, or when the pesticide label states "avoid contact with skin" or "do not get on skin" or a similar statement.

    b. Impervious gloves shall also be used when adjusting, cleaning, or repairing equipment, and during hand applications using hand-operated equipment.

4. Waterproof Clothing

    a. When the pesticide label specifies waterproof or impervious clothing (including approved disposable suits), the same shall be provided and worn.

    b. The clothing shall cover the torso, head, arms, hands, legs, and feet to minimize open skin exposure.

5. Respiratory Protection

    a. Employees required to wear a respirator shall be initially trained and fit tested.

        (1) Every employee shall have his/her respirator fit tested annually in conjunction with training.

        (2) All air purifying respirators (cartridge type) shall be NIOSH approved.

(3) Respirators shall be used when the pesticide labeling or current regulations require respiratory protection or when respiratory protection is needed to maintain employee exposure below the PEL of the product.

b. Each REC shall establish a written respiratory protection program. Respiratory Protection Program Policy and Procedures can be used to fulfill this requirement. Appendix A-5 also presents information concerning the implementation of a respiratory protection program.

c. REC AO shall normally conduct required annual fit testing, and issuing of respirators at all RECs.

d. Prior to fit testing, an Employees Statement of Medical Condition/Physician's Report of Medical Evaluation (Attachment K) shall be completed by every employee and made available at the time of fit testing:

(1) If the employee indicates no medical condition(s) exist, fit testing shall be conducted on that employee.

(2) If yes is indicated, the employee shall be evaluated by a licensed physician and the bottom portion of the form Employees Statement of Medical Condition/Physician's Report of Medical Evaluation (Attachment K) shall be completed.

(3) Each REC shall be responsible for the cost associated with the medical evaluation.

(4) Upon the physician's recommendations, fit testing shall be conducted.

XIV. HAZARDOUS WASTE (HSC 25117)

A. REC activities that may produce pesticide waste subject to hazardous waste regulations include:

1. Rinsing or cleaning spray equipment or containers;
2. Spills of pesticide concentrate and dilutions;
3. Disposing of pesticide containers that are not triple rinsed;
4. Disposal of empty bags that contained pesticides;
5. Pesticide dilutions remaining in spray tanks at the end of the job; and
6. Pesticide concentrates that are no longer needed or cannot be used.

B. Waste Minimization

1. Spills are the leading cause of pesticide wastes. Every attempt should be made to eliminate or minimize pesticide waste. Waste reduction, resource recovery, and recycling are examples of waste minimization.

2. Suggestions for minimizing waste include:

    a. Triple rinsing empty containers, and adding the rinsate to the spray rig as a diluent.

        (1) Containers can possibly be disposed of at a county landfill.
        (2) Check for current local policy before disposal.

    b. Field rinsing spray tanks/rigs by applying rinsate back on the field according to label directions whenever possible.

    c. Mixing only the amount of pesticide needed for the application.

    d. Ensuring equipment is in good working condition by checking hoses, gaskets, fittings, and other equipment that might leak to verify their integrity.

    e. Purchasing pesticides when they are needed for the application.

        (1) Old pesticides that are no longer used or manufactured create a disposal problem.
        (2) Purchase only the amount of pesticide that is needed for the job.

C. Waste Management

1. Leftover pesticides, pesticide rinsate, and spill material must be disposed of according to local, state, and federal regulations.

    a. All containers must be capped.
    b. All containers must be labeled with the name of the contents.
    c. Rinsate containers must be labeled with the following information:
        (1) Name of the product;
        (2) Total amount of rinsate;
        (3) Percentage of dilution (if known);
        (4) Name, address, and phone number of a person who is responsible for the waste; and
        (5) The contents of each container shall be identified by a completed Chemical Waste Contents label (Attachment K).

2. Spill Procedures

    a. When a spill is a concentrate or a dilute mixture and occurs on soil:

        (1) Immediately collect the contaminated soil and place in a double plastic bag or lined container (e.g., metal drum);
        (2) Label the bag or lined metal drum with information required on the Chemical Waste Contents label;
        (3) Disposal will be the responsibility of the responsible person who owns the pesticide; and

(4) Coordination for disposal may be scheduled during hazardous waste disposal cycles.

b. When the spill is a concentrate and occurs on a concrete slab:

(1) Collect the material with a wet/dry shop vacuum or contain with a sorbent material (e.g., vermiculite, cat litter, saw dust, etc.);

(a) If a wet/dry shop vacuum is used, it must be triple rinsed, including all attachments.

(b) Vacuum rinsate must be disposed of as a hazardous waste.

(2) Place the material in a lined container that will not leak;

(3) Label the container with information to identify contents on the Chemical Waste Contents label (Attachment K);

(4) Disposal will be the responsibility of the person who owns the pesticide; and

(5) Coordination for disposal may be scheduled during hazardous waste disposal cycles.

c. When the spill is a dilute mixture and occurs on a concrete slab:

(1) Collect the material with a wet/dry shop vacuum;

(a) If a wet/dry shop vacuum is used, it must be triple rinsed, including all attachments.

(b) The vacuum rinsate must be disposed of as a hazardous waste.

(2) Place the collected material in the spray tank/rig for application to the commodity for which it was originally intended.

(3) If returning collected material to the spray tank/rig is not possible, the material can be placed in a labeled container that identifies:

(a) The responsible person;
(b) The collected material according to the pesticide label; and
(c) Concentration of the material;

(4) If the spill is contained with a sorbent material, the material must be placed in a lined container;

(5) Disposal will be the responsibility of the person who owns the pesticide; and

(6) Coordination for disposal may be scheduled during hazardous waste disposal cycles.

3. Pesticide containers must be triple-rinsed and punctured to render them useless before disposal at a local landfill (see Paragraph XVIII. Transportation of Pesticides).

   a. It is advisable to check with the landfill to determine if a disposal permit is required and if containers must be crushed to maximize landfill space.

   b. A completed Empty Pesticide Container Disposal form (Attachment L) must be attached to each container prior to delivery to the landfill.

   c. Empty pesticide bags may be disposed of in the same manner.

D. Researcher-Generated Wastes

1. All researchers will be responsible for costs (disposal fees, portion of generator fees, and hazardous waste taxes) associated with the disposal of all hazardous wastes that they generate.

2. Once a material is classified as a hazardous waste:

   a. It shall be inventoried by the REC; and

   b. Arrangements for disposal shall be initiated to have the material removed from the REC within 90 days of the inventory date.

3. If alternative arrangements were made by the researcher (e.g., removal of the material by the researcher), the REC's Superintendent shall be notified of those arrangements to ensure compliance with all local, state, and federal regulations.

   a. Researchers are encouraged to return all unused material to their campus department upon completion of their projects.

   b. Arrangements should be made prior to the acceptance of any donated material to return all unused material back to the manufacturer at their cost.

XV. INVENTORY OF PESTICIDES

An up-to-date inventory of all pesticides and other hazardous materials stored at the RECs shall be maintained at all times (including non-restricted, restricted, and experimental pesticides).

A. It shall be the responsibility of each person who brings any material on site to immediately notify the REC's representative in order to have the material inventoried.

B. Inventories shall be updated a minimum of every three months. It shall be the responsibility of each person to provide an update of their materials to the REC's representative.

1. The name, phone number, and date of the responsible person shall be legibly and permanently written on every label or affixed in some other manner to the container.

2. An MSDS must accompany the product.

3. A copy of the MSDS must be provided to the REC's representative at the time the material is brought on site. Attachment N entitled Guidelines for Pesticide Retention & Disposal provides additional inventory information.

XVI. STORAGE OF PESTICIDES (CCR, Title 3, Sections 6670, 6676, 6678 and 6680)

A. All pesticide containers (empty or parts thereof) or equipment that holds or has held a pesticide, shall not be stored, handled, emptied, disposed of, or left unattended in such a manner or at any place where they may present a hazard to persons, animals (including bees), food, feed, crops or property.

B. Pesticides brought onto REC property and all unrinsed pesticide containers must be stored at the pesticide storage facility or other locations as approved by REC AO. EH&S Safety Net #49: Pesticide Storage (Attachment O) provides basic requirements for the proper storage of pesticides including the following:

1. Pesticides will be kept in their original containers unless being transferred into a service container to be used in the field.

2. If a secondary container must be used because the original container leaks or is structurally unsound, the pesticide shall never be placed in containers that are commonly used for food, drink, or household products.

3. Labels shall not be removed from original containers.

a. All service and secondary containers must be properly labeled according to REC AO container labeling/inventory requirements (Attachment P).

b. The label must depict the following:

(1) Identity of the responsible person;

(2) Date the pesticide was brought on site; and

(3) The name of the pesticide and toxicity or signal word (DANGER, WARNING, CAUTION).

c. Appendix A-2 contains further labeling information

XVII. POSTING OF PESTICIDE STORAGE AREAS (CCR, Title 3, Section 6674)

Pesticide storage facilities shall have signs visible from any direction.

A. This includes storage areas in which containers hold pesticides.

B. The signal words Warning or Danger shall be used.

C. Each sign shall be sufficiently large to be readable at a distance of 25 feet.

D. Each sign shall have the following verbiage in all appropriate languages:

DANGER
POISON STORAGE AREA
ALL UNAUTHORIZED PERSONS KEEP OUT
KEEP DOOR LOCKED WHEN NOT IN USE

XVIII. TRANSPORTATION OF PESTICIDES (CCR, Title 3, Section 6682)

A. Pesticides shall not be transported in the same compartment with persons, food, or feed (Appendix A-2).

B. Pesticide containers shall be secured in an upright position.

C. The container opening shall be closed during transportation to prevent spillage.

D. Paper, cardboard, and similar containers shall be covered when necessary to protect them from moisture.

E. Proper labels must be affixed to all containers, original or secondary.

XIX. RINSE AND DRAIN PROCEDURES (CCR, Title 3, Section 6684)

A. Each emptied container which held less than 28 gallons of a liquid pesticide that is diluted for use shall be rinsed and drained by the user at time of use (Appendix A-2) as follows:

1. Use the following amount of water or other designated spray carrier for each rinse;

Size of container	Amount of rinse medium
Less than 5 gallons	1/4 container volume
5 gallons or over	1/5 container volume

2. Place required minimum amount of rinse medium in the container, replace closure securely, and agitate;

3. Drain rinse solution from container into tank mix. Allow container to drain for 30 seconds after normal emptying; and

4. Repeat Steps in Paragraph XIX.A.2. and Paragraph XIX.A.3. above at least two times for a total of three rinses.

B. Alternative Rinse and Drain Method

1. Invert the emptied container over a nozzle located in the opening of the mix tank which is capable of rinsing all inside surfaces of the container.

2. Activate the rinse nozzle allowing the rinse solution to drain into the tank.

3. The rinsing method will continue until the rinsate appears clear and a minimum of one-half of the container volume of rinse medium has been used.

XX. FUMIGATION OF ENCLOSED SPACES (CCR, Title 3, Section 6782)

A. Enclosed spaces include, but are not limited to vaults, chambers, greenhouses, vans, vehicles, and structures.

1. Tarpaulin-covered structures and commodities are also considered enclosed spaces.

2. This paragraph applies when fumigation requires tarpaulin-covered structures or commodities, including greenhouses.

B. Whenever a fumigant is used inside an enclosed space, at least two trained employees shall be present at all times during the introduction of the fumigant and entry into the enclosed space to facilitate aeration, or when determining the concentration of the fumigant.

C. Warning signs visible from all directions shall be posted.

1. The signs shall be printed in red on white background and shall contain in English and Spanish the following statement in letters not less than two inches in height: DANGER - FUMIGATION.

2. The sign will depict a skull and crossbones at least one inch in height.

3. The following items shall be listed:

a. The name of the fumigant;
b. Date and time fumigant was introduced into the structure; and
c. The name, address, and phone number of the person who performed the fumigation.

D. No employee shall be allowed to enter a fumigated area except to determine the fumigant concentration or to facilitate aeration.

XXI. FIELD FUMIGATION (CCR, Title 3, Section 6784)

A. Whenever Methyl Bromide or Chloropicrin is used for field fumigation at least two trained employees must be present during the introduction of fumigant and removal of tarps, when used.

B. Signs shall be posted as described in Paragraph XX.C., and shall remain in place until aeration is complete.

XXII. CLOSED SYSTEMS (CCR, Title 3, Section 6746)

A. Employers shall provide closed systems for:

1. Employees that mix or load liquid pesticides in toxicity Category 1 for the production of an agricultural commodity; and

2. Employees that load diluted liquid mixes derived from dry pesticides in toxicity Category 1 for the production of an agricultural commodity.

B. No employee shall be permitted to transfer, mix, or load Category 1 pesticides except through a closed system.

C. The requirements of Paragraph XXII. do not apply to employees who handle a total of one gallon or less of pesticides in toxicity Category 1 per day exclusively in original containers of one gallon or less. Refer to Appendix A-3.

XXIII. MINIMAL EXPOSURE PESTICIDES (CCR, Title 3, Sections 6790 and 6793)

A. The following compounds are considered minimal exposure pesticides (Appendix A-10):

1. Bromoxynil (Buctril, Bronate);
2. Folpet;
3. Oxydemeton-methyl (Metasystox-R); and
4. Propargite (Omite CR, Comite).

B. Appropriate protective work clothing, change area, and washing facilities shall be provided when handling minimal exposure pesticides for any period of time, regardless of the pesticide toxicity category.

C. A closed system shall be used for all mixing, loading or transfer of formulations or loading of diluted liquid mixes derived from dry formulations regardless of toxicity.

D. The requirements of Paragraph XXIII.C. do not apply when a total of one gallon or less of the above pesticides in their original containers is handled per day.

E. Employees shall be required to wear full body, chemical-resistant, protective clothing when handling minimal exposure pesticides except as follows:

1. When using a closed system, or sealed water soluble packets while mixing, loading, or transferring the above pesticides, the employee will wear a chemical-resistant apron, gloves, and boots;

2. When working in enclosed cabs during applications;

3. Flaggers working in enclosed vehicles; and

4. Applications made when using vehicle mounted spray nozzles directed downward and located below the level of the operator.

F. Employees shall be required to wear proper respirator protection when hand application or ground application is performed.

G. Employees are not required to wear proper respirator protection as follows:

1. Applications made when using vehicle mounted or towed equipment to inject or incorporate the above pesticides in soil.

2. Applications made when using vehicle mounted spray nozzles directed downward, and located below the level of the operator.

3. Flaggers working in enclosed vehicles.

4. Mixing or loading of dry formulations using sealed water soluble packets.

H. All protective clothing and equipment will be cleaned inside and out or discarded at the end of each day's use.

XXIV. PESTICIDE USE AND HANDLING REFERENCES

A. California Code of Regulations, Title 3, Division 6 - Pesticide Regulatory Program
B. California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 7 - General Industry Safety Orders
C. California Health and Safety Code
D. UCD Policy and Procedure Manual, Section 290-27
E. REC AO Policies and Procedures and Hazard Communication Program
F. UCD EH&S Safety Nets
G. Agriculture and Natural Resources Administrative Handbook

DAILY PESTICIDE USE RECORD
_____ RESEARCH AND EXTENSION CENTER

Date: _____ County: _____

Address: _____ Research and Extension Center Identification No.: _____

SITE ID NUMBER	CROP/COMMODITY	TOTAL ACRES PLANTED	PESTICIDE	EPA/CAS NUMBER	TOTAL ACREAGE TREATED	HOUR TREATMENT COMPLETED

_____

NAME OF PERSON MAKING/SUPERVISING APPLICATION
(COMMERCIAL APPLICATIONS ONLY)

REMARKS: _____

NOTE: This record shall be retained for two years.

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

MONTH 1 ______ YEAR 2 ______

☐ NURSERY 3

PAGE _____ OF _____

OPERATOR ID/PERMIT NO. 4	OPERATOR (GROWER) 5	ADDRESS 6	CITY 7	ZIP CODE 8	
SITE ID NO. 9	TOTAL PLANTED ACREAGE/UNITS 10	COUNTY NO. 11	SECTION 12	TOWNSHIP 13	RANGE 14
BANK & MERIDIAN 15 ☐ S ☐ M ☐ H					
COMMODITY/SITE TREATED 17			FIELD LOCATION 19		

CHEMICAL NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP. METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA/CALIF. REG. NO. (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT/MANUFACTURER 31
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				
			GR ☐ AIR ☐ OTHER ☐			☐lb ☐oz ☐pt ☐qt ☐ga				

REPORT PREPARED BY ______________________ DATE ____________ REVIEWED BY ______________________

(1) CAC Submit to Agricultural Commissioner within 10 days of month following application 33-017C (3/90) For Agency Use Only

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
INFORMATION SERVICES UNIT
MONTHLY SUMMARY PESTICIDE USE REPORT

3P-040 (REV. 3/84)

DATE SUBMITTED: _____

OPERATOR (FIRM NAME)		COUNTY (WHERE APPLIED)	COUNTY NO.	MONTH/YR. OF USE	NAME OF PERSON RESPONSIBLE FOR REPORT
ADDRESS		CITY		ZIP CODE	**SUBMIT IN DUPLICATE TO THE COUNTY AGRICULTURAL COMMISSIONER BY THE 10TH OF THE MONTH FOLLOWING THE APPLICATION.**
PHONE NUMBER ( ) -	LICENSE NUMBER	RESTRICTED MATERIAL PERMIT NO.	TOTAL # OF APPLICATIONS		

COMPLETE COLUMNS A, B AND C FOR ALL USES

IF USE IS:	CODE
STRUCTURAL PEST CONTROL	1
LANDSCAPE MAINTENANCE	3
RIGHTS OF WAY	4
PUBLIC HEALTH PEST CONTROL	5
VERTEBRATE PEST CONTROL	8
REGULATORY PEST CONTROL	10

THEN:
ENTER CODE IN COLUMN D
LEAVE COLUMNS E & F BLANK

IF USE IS:
COMMODITY FUMIGATION
SPOT TREATMENT
SEED TREATMENT
OTHER (AS PERMITTED BY THE COUNTY AG. COMM.)

THEN:
LEAVE COLUMN D BLANK
FILL IN COLUMNS E & F

USE DEFINITIONS

STRUCTURAL PEST CONTROL - any pest control work performed within or on buildings and other structures. This includes work done by a licensed structural pest control operator.

LANDSCAPE MAINTENANCE - any pest control work performed on landscape plantings around residences, or other buildings, golf courses, parks, school grounds, cemeteries, etc.

RIGHTS-OF-WAY - any pest control work performed along or on roadsides, power lines, ditch banks and similar sites.

PUBLIC HEALTH PEST CONTROL - any pest control work performed by or under contract with state or local public health or **vector** control agencies.

REGULATORY PEST CONTROL - any pest control work performed by public employees or contractors in the control of regulated pests.

	A MANUFACTURER AND NAME OF PRODUCT APPLIED	B REGISTRATION NUMBER FROM LABEL INCLUDE ALPHA CODE	C TOTAL PROJECT USED (Check One Unit of Measure)	D CODE	E COMMODITY OR SITE TREATED	F ACRES/UNITS TREATED
1			☐LB ☐OZ ☐PT ☐QT ☐GA			
2			☐LB ☐OZ ☐PT ☐QT ☐GA			
3			☐LB ☐OZ ☐PT ☐QT ☐GA			
4			☐LB ☐OZ ☐PT ☐QT ☐GA			
5			☐LB ☐OZ ☐PT ☐QT ☐GA			
6			☐LB ☐OZ ☐PT ☐QT ☐GA			
7			☐LB ☐OZ ☐PT ☐QT ☐GA			
8			☐LB ☐OZ ☐PT ☐QT ☐GA			
9			☐LB ☐OZ ☐PT ☐QT ☐GA			
10			☐LB ☐OZ ☐PT ☐QT ☐GA			

RESEARCH AND EXTENSION CENTER
PEST CONTROL APPLICATION INFORMATION

Applicator: _____ Department: _____

Location: _____ Commodity/Crop: _____

Acre(s)/Unit(s): _____ Date of Application: _____ Date of Completion: _____

Pesticide: _____ Restricted: ☐ Yes ☐ No

Rate/Acre or Unit Area: _____ Dilution/Volume: _____

Volume/Acre: _____ Formulation (lb./gal., % Active, etc.) _____

Target Pest(s) _____

APPLICATION

Type: ☐ Aerial ☐ Ground-Dilute ☐ Concentrate

Time Applied: _____ Re-entry (Days) _____ Day(s) to Harvest: _____

Posting Required: ☐ Yes ☐ No Close System: ☐ Yes ☐ No

CRITERIA FOR RECOMMENDATION

☐ Pest(s) is/are present

☐ Pest(s) is/are known to occur

☐ Other _____

REMARKS (Hazards and/or Restrictions, etc.)

☐ Highly toxic to bees

☐ Toxic to birds, fish or wildlife

☐ Do not apply when irrigating or runoff is likely to occur

☐ Cutoff date applies (see label)

☐ Do not allow to drift to susceptible plants

☐ Other _____

☐ Keep out of lakes, ponds and streams

☐ Do not apply when foliage is wet (dew, rain, etc.)

☐ Do not feed treated foliage or straw to livestock

☐ May cause allergic reactions to some people

☐ Residence, shop, laboratory, office in vicinity

I certify that I have considered alternatives and mitigation measures that would substantially lessen any significant impact on the environment, and to have adopted those found feasible.

Name: _____ Department: _____

Date: _____

RESEARCH AND EXTENSION CENTERS
PESTICIDE SAFETY TRAINING RECORD
(Suggested Format)

EMPLOYEE NAME: _____

DEPARTMENT: _____

TRAINER'S NAME: _____

ASSIGNED JOB DUTY(S): ☐ Mixer-Loader ☐ Applicator ☐ Flagger ☐ Other _____

Read the Label: Signal Word: Danger, Warning or Caution, Cautionary Statement, First Aid, Rate, Volume								
Emergency Medical Information: Name, Address, Phone Number of Clinic, Physician or Hospital Emergency Room. Where Information is located								
Report Immediately Symptoms of Poisoning: Pinpoint Pupils, Nausea, Shortness of Breath, Dizziness, Headache, Blurred Vision								
Immediately Decontaminate Skin and Eyes When Exposure Occurs								
Wash Completely at the End of the Work Day. Change Into Clean Clothing.								
Wash Hands and Arms With Soap and Water Before: Eating, Drinking, Smoking, Going to the Bathroom.								
Wear Clean Clothes Daily.								
Protective Clothing and Equipment: Coveralls, Cloves, Goggles, Boots, Respirator, Apron, Etc.								
Respirator Equipment: Proper Use, Maintenance and Storage.								
Medical Supervision: Maintain use records when working with carbamates or organophosphates. Medical surveillance by Occupational Health Physician.								
Closed Systems Shall Be Used: When Mixing or Transferring a Liquid Pesticide Labeled Danger or Liquid Mix or a Dri Category 1.								
Safe Procedures: Pouring, Lifting, Opening, Mixing of Pesticides and Operating Equipment, etc.								
Triple Rinse Containers At Time of Use and Dispose of Properly.								
Drift: Confine the Spray to the Crop. Watch out for People, Animals, Waterways, or any Special Hazards. Work INTO the Wind.								
Storage of Pesticide Containers: Keep in a Locked and Posted Area and Inspect for Proper Labeling and Condition of Containers.								
Review Pesticide Information Series.								
Employee Initials:								
Date:								
PESTICIDES								

Trainer/Supervisor Initials

safety net
UC DAVIS ENVIRONMENTAL HEALTH AND SAFETY • 2-1493

SAFETY TRAINING TIPS
SafetyNet #39

Safety is a part of every employee's job. Knowing how to work safely is just as critical as coming to work on time or selecting the right equipment. It is the responsibility of every supervisor to ensure that employees learn and practice safe work habits. This SafetyNet will assist supervisors in understanding and applying safety training techniques to individual situations.

No conscientious supervisor would allow an untrained employee to perform a hazardous task. Federal and California laws require safety training. Many California Occupational Health and Safety Administration (Cal/OSHA) mandated programs require training and specific training documentation practices. Most safety training is best performed by supervisors. Supervisors are named in several OSHA mandated programs as being responsible and accountable for assuring employees receive training prior to starting work or any time a new material or process is introduced. The supervisor is usually the most knowledgeable individual about the job and its hazards. The supervisor is also best able to evaluate safety as a part of overall job performance.

OSHA Guidelines

Cal/OSHA has general rules for testing the appropriateness of training.

- Training must be specific to the hazards of individual job assignments.
- Clearly inform employees what conditions are infractions of departmental safety rules.
- Give supervised work experience before allowing employees to perform hazardous operations on their own.

Training Techniques

Safety training can be accomplished in many different ways. Supervisors should evaluate these alternative techniques and determine which one(s) will work best for their employees.

- **On-the-job safety training and one-on-one discussions** with employees are usually the **most effective** and time efficient when combined with on-the-job skills training.
- **Safety meetings** can be very valuable in cases requiring group cooperation (for instance, ensuring that a group knows how to organize in an emergency).
- **Examination of case histories, scenarios, and role-playing** are often used in group situations. These techniques require advance preparation on the part of the instructor and careful consideration of the audience. Some audiences will respond well while others may not.
- **Lectures** are the cheapest, most commonly used, and **least effective** method of safety training.

Involving trainees in discussions or question and answer sessions are methods to make lectures more effective.

- **Demonstrations** that are interactive and encourage audience participation allow a larger group to be a part of specific on-the-job training.

- **Audiovisual (AV) materials** and computer-based demonstrations or programs are effective when "live" demonstrations are too costly or hazardous. Computer-based programs can be effective for "refresher" training.

- **Printed materials** are useful as supplementary information, but the material and audience must be compatible. These materials are useful for training individuals who have a good grasp of the subject material but who may need a "refresher" or additional information to fill in gaps.

When deciding which combination of approaches will work best, the supervisor must keep the information and the audience in mind. For instance, lecture style would not be suitable for training employees in the safe operation of a centrifuge. A demonstration to a small group or one-on-one on-the-job training is a better method. Audiovisual (AV) materials are ideal for illustrating the consequences of improper solvent storage or other inappropriate procedures that might be dangerous or too costly to demonstrate.

The safety trainer must also consider the conditions under which the training will be given. Is an area available in which employees will be able to view AV materials comfortably or listen to a lecture without distractions?

Attitudes

Supervisors may have difficulty convincing their staff to take safety training or safety measures seriously. The problem may lie in the supervisor's attitude, the employee's attitude, or supervisor-employee communications.

Sometimes supervisors have trouble convincing themselves of the value of safety training. With this mindset, they will certainly not be able to persuade their employees that safety training is worthwhile. Supervisors who have questions about why certain safety training is necessary are encouraged to call EH&S. We can provide practical incentives for safety training. Often the supervisor finds that his or her objections are not to the training itself but to the way it has been traditionally presented. For example, if you dislike a videotape that is used to illustrate the safe handling of radioisotopes, we can help you find an alternative.

Inappropriate safety training may negatively influence employees. Being forced to attend lectures on safety topics that do not concern them or that are well below their level of competence are two major reasons employees feel that safety training is trivial. Supervisors should actively solicit employee feedback concerning the safety training they have received and then act on the employee comments as much as possible.

Employees and supervisors may also become complacent. They may believe they have been on the job so long that they know everything possible about health and safety. They may think because they have worked haphazardly for many months or years without adverse consequences that the hazards of the job have been overemphasized. Supervisors must consider the temperament of the individual employee when deciding how to overcome these attitudes. A simple suggestion is for the supervisor to first approach the employee with genuine friendly concern (e.g., "I've noticed that you often don't wear your safety goggles when using the grinder and I'm very concerned because there is a real chance of injury from flying metal

particles. Don't they fit properly or do they bother you somehow?"). An employee faced with this approach should not feel that he or she is being accused of some defective behavior. If the first approach is not successful, subsequent approaches may be regulatory, authoritarian, or an appeal to the employee's self-interest.

Safety performance should be assessed at the time of each performance evaluation. SafetyNet #64, "Guidelines for Evaluating Safety Performance", can assist supervisors. When writing the evaluation, remember to point out positive aspects of employee safety performance as well as negative ones.

EH&S is often asked how a supervisor can train an employee who knows more about the subject matter than the supervisor does. This employee can be an asset to the safety training program. He or she could train other employees or develop the safety program for the unit. (The employee should be rewarded for doing a good job by noting the fact on the performance evaluation). If the individual has a great deal of knowledge but has some weak areas or needs a regulatory update, try to present the information as concisely as possible. A good method is to supply the employee with pertinent written material to be read by a certain date, initialed, and returned to the supervisor. In general, knowledgeable employees should not be required to attend basic classes or lectures or shown elementary AV programs. These tactics, while often the path of least resistance, can actually worsen safety performance. The employee gets the message that safety is so unimportant to management that they will not make even the slightest effort to prepare an individualized program.

Measuring Training Effectiveness

Methods of gauging the effectiveness of safety training include:

- **Performance tests or demonstrations.** Each employee demonstrates for the instructor the safe method just taught. Demonstrations can be time-consuming, but very useful.

- **Written tests.** The cheapest, easiest, most commonly used but least reliable method. Tests are suitable for discovering the extent of knowledge about a regulatory topic, policy change, or other nonperformance subject.

- **Random on-the-job observation.** Effective if the supervisor or instructor immediately corrects any unsafe behavior and rewards the employee for incorporating the safety instructions into the job. Observation is not inherently time-consuming, since the supervisor should be observing employees anyway.

Determining the contribution of the safety training program to employee safety performance is not easy because so many other factors enter into an employee's decision whether to work safely or not. Some of these factors are the state of management-employee relations, work area design, employee fatigue or inattention, and pressure from less safety-conscious peers.

Documentation

Good documentation is essential for the success of any safety training program. Supervisors must be able to prove to regulatory agencies that safety training has, in fact, been carried out. Proper documentation consists of the following four elements:

- Date of training

- Who presented the training

- Names of attendees and, if possible, their signatures

- An outline of topics discussed and a copy of handout materials.

Documentation should be kept with departmental personnel records.

EH&S Resources

Upon request, EH&S at 530-752-1493 will assist supervisors in providing safety training. Some types of assistance we can offer are:

- **Classes.** EH&S offers safety classes on a variety of topics throughout the year. These classes are primarily designed to inform employees about regulations and UC Davis policy and are not intended as complete safety training programs.

- **Audiovisual and printed materials.** Campus units can borrow slide shows and/or videotapes from EH&S. Supervisors can also obtain printed materials, including SafetyNets, for use in their training programs. An on-line inventory of AV materials and a complete list of SafetyNets and videos available from EH&S are detailed on our web site (http://ehs.ucdavis.edu). Videos may be checked out from the Carlson Health Sciences Library.

- **Speakers.** EH&S representatives are available to speak to employees or students about health and safety.

The Last Word

No safety training program is effective unless safety is **actively promoted** by the supervisor and **applied** on the job.

For additional information, contact your EH&S Safety Advisor, EH&S at 530-752-1493 or ehsdesk@ucdavis.edu.

Rev. 01/2007
VB

RESEARCH AND EXTENSION CENTERS
MEDICAL SUPERVISION WRITTEN STATEMENT

I, _____ , agree to provide medical supervision for the employee(s)
(Physician)

of _____ . I possess a copy of, and am aware
(Research and Extension Center)

of the contents of the document "Medial Supervision of Pesticide Workers Guidelines for Physicians."

_____	_____
(Physician)	*(Research and Extension Center)*
_____	_____
(Address)	*(Address)*
_____	_____
(City, State, ZIP)	*(City, State, ZIP)*
_____	_____
(Telephone Number)	*(Telephone Number)*
_____	_____
(Physician's Signature)	*(Superintendent's Signature)*

(One copy of this document is required to be in the Research and Extension Center and Research and Extension Center Administrative Office files. A copy must be filed with the Agricultural Commissioner's Office prior to any employees working with category I or II organophosphates or carbamates.)

RESEARCH AND EXTENSION CENTERS
MEDICAL SURVEILLANCE - PESTICIDE USE

Employee: _____ I.D. Number: _____

Research and Extension Center: _____ Month of Use/Handling: _____

Report all pesticide use and handling (herbicides, insecticides, fungicides, etc.) regardless of the amount for the month. When no pesticides are used or handled indicate NO PESTICIDE USED. ***Use or handling of Carbamates and/or Organophosphate pesticides for any length of time constitutes a full day of exposure for each occurance***. Return this form to the REC's responsible recordkeeping person.

PESTICIDE	TOXICITY CATEGORY	CA*	OR**	DATE APPLIED	TIME EXPOSED (HOURS/MINUTES)	REMARKS

*CA - Carbamates **OR - Organophosphates
(Retain this form for three years)

RESEARCH AND EXTENSION CENTER
EMPLOYEE'S STATEMENT OF MEDICAL CONDITION

Site Location: _____
(Research and Extension Center/Other)

Employee Name: _____
(Type or print)

In accordance with Title-3, Section 6738 of the California Code of Regulations, ***to the best of my knowledge,*** **I have ☐, have no ☐** medical conditions which would interfere with wearing a respirator while engaged in hazardous exposure situations. I understand that heart disease, high-blood pressure, lung disease or presence of a perforated ear drum require specific medical evaluations by a physician before safe use of a respirator can be determined.

_____ _____
(Employee Signature) *(Date)*

PHYSICIAN'S REPORT OF MEDICAL EVALUATION

In accordance with Title-3, Section 6738 of the California Code of Regulations, the employee named above has been given an examination by me on this date. There **are ☐, are no ☐** medical contraindications to the employee named above from wearing a respirator which allows the working in hazardous exposure environments.

COMMENTS: _____

_____ _____
(Printed Physician's Name) *(Date)*

_____
(Physician's Signature)

Address: _____

_____

Phone: _____

CHEMICAL WASTE CONTENTS

Dept.: ______________________ Ph.: __________

Bldg.: ______________________ Rm.: __________

Contact Person: ______________________________

Check appropriate box(es)

☐ Chlorinated Solvents >1000 ppm ☐ pH <3
☐ Other Solvents >1% ☐ pH >11
☐ Water______% ☐ Oxidizers
☐ Heavy Metals >100 ppm ☐ Explosives
☐ Cyanides or sulfides>1000 ppm ☐ Water Reactives

Contents (Do not abbreviate)	%/ppm
	%
	%
	%
	%
	%
	%
	%

EH&S 1/87

CHEMICAL WASTE CONTENTS

Dept.: ______________________ Ph.: __________

Bldg.: ______________________ Rm.: __________

Contact Person: ______________________________

Check appropriate box(es)

☐ Chlorinated Solvents >1000 ppm ☐ pH <3
☐ Other Solvents >1% ☐ pH >11
☐ Water______% ☐ Oxidizers
☐ Heavy Metals >100 ppm ☐ Explosives
☐ Cyanides or sulfides>1000 ppm ☐ Water Reactives

Contents (Do not abbreviate)	%/ppm
	%
	%
	%
	%
	%
	%
	%

EH&S 1/87

CHEMICAL WASTE CONTENTS

Dept.: ______________________ Ph.: __________

Bldg.: ______________________ Rm.: __________

Contact Person: ______________________________

Check appropriate box(es)

☐ Chlorinated Solvents >1000 ppm ☐ pH <3
☐ Other Solvents >1% ☐ pH >11
☐ Water______% ☐ Oxidizers
☐ Heavy Metals >100 ppm ☐ Explosives
☐ Cyanides or sulfides>1000 ppm ☐ Water Reactives

Contents (Do not abbreviate)	%/ppm
	%
	%
	%
	%
	%
	%
	%

EH&S 1/87

CHEMICAL WASTE CONTENTS

Dept.: ______________________ Ph.: __________

Bldg.: ______________________ Rm.: __________

Contact Person: ______________________________

Check appropriate box(es)

☐ Chlorinated Solvents >1000 ppm ☐ pH <3
☐ Other Solvents >1% ☐ pH >11
☐ Water______% ☐ Oxidizers
☐ Heavy Metals >100 ppm ☐ Explosives
☐ Cyanides or sulfides>1000 ppm ☐ Water Reactives

Contents (Do not abbreviate)	%/ppm
	%
	%
	%
	%
	%
	%
	%

EH&S 1/87

RESEARCH AND EXTENSION CENTERS
EMPTY PESTICIDE CONTAINER DISPOSAL

Department: _____ Name: _____

Product Name	Category	Container Type	No. & Size of Container

The containers listed above were triple rinsed and punctured, (except for glass) and received at the landfill on:

_____ _____
(Date) *(Signature)*

_____
(Print Name)

safety net
UC DAVIS ENVIRONMENTAL HEALTH AND SAFETY • 2-1493

GUIDELINES FOR PESTICIDE RETENTION AND DISPOSAL
SafetyNet #38

Pesticides, like other hazardous materials, tend to accumulate in storage unless diligent and on-going measures are taken to manage and dispose of them. In order to minimize accumulation of pesticides, the following guidelines should be followed.

General

- All pesticides under university control must be stored in proper pesticide storage facilities. For information on what constitutes a proper storage facility, see SafetyNet #49**,** "Pesticide Storage."

- **An individual should be assigned responsibility for each pesticide and its container.** The name of the person responsible should appear on the container. This individual is responsible for ensuring the container is labeled, in good condition, retained in storage only if it meets the criteria below and that it is properly disposed of or returned to the manufacturer if these standards are not met.

- Maintain Material Safety Data Sheet and label information on all materials being stored.

Registered Pesticides

- Only pesticides that are currently registered for use in the State of California should be kept. Pesticides without current registrations should be disposed of in accordance with appropriate regulations.

- Only pesticides in active or specifically anticipated use should be kept. Pesticides that "might be used someday," but for which no current plan exists, should be disposed of in accordance with appropriate regulations.

- Every pesticide must be in its original container with the original label affixed, or repackaged with an original or equivalent label affixed to the new container. Unlabeled or cryptically labeled containers are not permitted.

- Repackaged pesticides must be in containers appropriate for the materials. Food containers or containers that might be confused with food containers must **never** be used for storing pesticides.

- Any container in which a pesticide is stored must be in sound condition. Leaking containers should be placed in secondary containment (recovery containers) until they are properly disposed.

Non-Registered Pesticides (research and experimental pesticides)

- Only non-registered pesticides currently being used should be kept. Materials for which no current field trial exists should be returned to the manufacturer.

- Non-registered pesticides should not be accepted for trial or research unless the manufacturer provides the following:

    - Authorization and procedures to return unused material to the manufacturer at the completion of the trial.
    - Information equivalent to a Material Safety Data Sheet or label for the material. Information that must be on the label includes:

        a. Type of pesticide.

        b. Physical characteristics of the material including flammability, solubility, incompatibilities, and evaporation rates.

        c. Hazards associated with exposure to the material, including acute and long-term.

        d. Personal protective equipment required for use.

        e. Field re-entry requirements.

The information above must be affixed to all containers of the pesticide, including tanks on spray rigs.

Unlabeled pesticides should never be accepted.

For additional information, contact your EH&S Safety Advisor, EH&S at 530-752-1493 or ehsdesk@ucdavis.edu.

Rev . 2/2007
jla

safety net
UC DAVIS ENVIRONMENTAL HEALTH AND SAFETY • 2-1493

PESTICIDE STORAGE
SafetyNet #49

Pesticide storage facilities must meet certain minimum requirements to prevent accidental releases to the environment and to protect the safety of personnel working within them. The following guidelines are intended to assist personnel in designing and using pesticide storage areas for agricultural use.

- Floor drains are prohibited. This prevents accidental release of pesticides into the sewer system.
- Floors and shelves must be impervious to moisture. Concrete floors and wooden shelves must be sealed with latex or epoxy paint to facilitate cleaning.
- Pesticide containers must be secured to keep them from tipping over.
- Elevated and wall-mounted shelves used to store pesticides must have edges that act as secondary containment for spills.
- Facilities must be ventilated by rotary vents or mechanical ventilation to prevent accidental respiratory exposure. A strong pesticide odor in a storage facility indicates the need for better ventilation.
- Storage facilities must 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 showers and eyewashes located near the facility and;
    - Washing of hands and face (*applies to Category I and II pesticides only).* Soap and towels must also be made available.
- All doors to the facility must be posted with the following warning sign:

DANGER
POISON STORAGE AREA
ALL UNAUTHORIZED PERSONS KEEP OUT
KEEP DOOR LOCKED WHEN NOT IN USE

Signs must be legible at a distance of 25 feet from any direction and be written in both English and Spanish.

- The name, address, and phone number of the nearest emergency medical facility must be posted prominently at the worksite.
- Insecticides and fungicides must not be stored on the same shelves as herbicides to prevent unintended cross-contamination.

- Open bags of pesticides must be enclosed in properly labeled secondary containers to prevent the material from spilling if the primary container is damaged.

- If primary pesticide containers are rusted or otherwise damaged, plastic or metal secondary containers must be provided to prevent accidental leakage. Secondary containers must be labeled to identify the contents in primary containers.

- **NEVER** store pesticides in containers that have been used to hold food.

- Any container in storage that holds a pesticide must have secured to it a copy of the original pesticide label. Additional labels are available from the manufacturer or can be copied from the *Crop Protection Chemical Reference***,** Wiley & Sons Inc., 605 3rd Ave., New York, NY 10157, for a fee.

- Experimental pesticides and/or those being used under "blind" conditions must carry a label equivalent, including:

    - Pesticide name or code number
    - Type (insecticide/herbicide/rodenticide, etc.)
    - Crop
    - Hazards
    - Required protective equipment
    - Date of receipt
    - Date of experiment termination
    - Custodian name
    - The words "**FOR EXPERIMENTAL USE ONLY**"

- Any diluted pesticide in storage or in service containers such as spray rigs must be labeled with:

    - Name of pesticide
    - Signal Word (Danger/Warning/Caution)
    - Custodian name
    - Custodian phone number
    - Date of dilution

- Pesticides must not be stored directly on the floor unless double contained.

- Storage areas must be kept clean and uncluttered. Triple-rinse, puncture and drain empty containers before discarding. Drain rinse solution from the container into the tank mix.

- Pesticides in pressurized containers must be stored and transported within the temperature range stated on manufacturing labels.

- Pesticides must not be transported or stored in the passenger area of vehicles. UC Davis Policy and Procedure 290-65 requires all hazardous materials be transported in a University Vehicle

- Pesticides must be under the personal control of a responsible person at all times unless stored in a locked location.

For additional information, contact your EH&S Safety Advisor, EH&S at 530-752-1493 or ehsdesk@ucdavis.edu.

DIVISION OF AGRICULTURE AND NATURAL RESOURCES
OFFICE OF FACILITIES PLANNING AND MANAGEMENT
CONTAINER LABELING/INVENTORY

MAY 16, 1991

To maintain a safe working environment the following procedures, effective immediately, are to followed for ***all*** hazardous materials brought on to the Center and their use at the Center. Please include this procedure with your copy of the Administrative Guide for Pesticide Use and Handling, distribute a copy to all OFPM employees, and make copies available to all project leader (and staff) conducting research at the Center. These procedures are based on current Federal, State local, and Facilities Planning and Management (OFPM) laws, regulations, and policies.

1. Original container - In addition to manufacturers label, the name of the responsible person and date material was brought on to the site will be included. In accordance with OFPM Administrative Guide for Pesticide Use and Handling and Center Safety Plan, ***all*** materials to the Center chemical inventory. Material Safety Data Sheet (MSDS's) must accompany the material and will be placed in the Center MSDS file.

2. Secondary or service containers - Labels must contain: responsible person, date product was brought on to the site in original container, identity of material, toxicity or work (DANGER, WARNING, CAUTION). Label will be placed on all containers used to store, hold, and transport materials, and spray tanks/equipment containing over five (5) gallons exempt ***only during spray operations***; when used to store materials between spraying operations they must have the required labeling.

3. Carcinogens - Label must contain specific information in accordance with Federal and State laws. Contact OFPM at (530) 752-0128 for information.

H. David Towle — *(H. David Towle, OFPM Safety Officer)*

5/16/91 — *(Date)*

Click here to PRINT

Pesticide Safety Information Series A

Worker Health and Safety Branch

A-1 SAFETY REQUIREMENTS FOR PESTICIDE HANDLERS
In Agricultural Settings

This leaflet explains pesticide safety requirements and guidelines for pesticide handlers in the agricultural setting. The term "handle" refers to any activity related to the application of pesticides. Handle includes mixing, loading, applying, repairing or cleaning contaminated equipment, and handling unrinsed containers.

Hazards of Pesticides:

Before a pesticide is sold, many tests are conducted to determine the possible health and environmental hazards. Pesticides (and other chemicals) can be absorbed through your skin and into your body to cause illness. Hand exposure contributes significantly to the overall hazard of handling pesticides. Protecting the skin is often the most difficult problem associated with pesticide use.

Labeling and Regulations:

Federal laws require specific precautions on pesticide labels to protect your health. In addition, every label must display a signal word that gives an indication of the acute health hazard. The signal words are as follows:

- "Danger" indicates the pesticide is extremely toxic
- "Warning" indicates moderate toxicity
- "Caution" indicates low toxicity.

Federal and State laws require that pesticides be used according to the requirements on the label. Additionally, the State establishes its own regulations. In some cases, State regulations are more strict than Federal laws; this protects you in use conditions specific to California. You must follow both pesticide labels and State regulations. In case of a conflict, follow the more strict requirement.

Interpretation of Label Safety Precautions:

Interpret the safety precautions on the label carefully. Take into account the signal word and the application situation. If the label says to avoid breathing spray mist, you should wear a respirator for protection from inhalation hazards. Hazardous conditions may occur in open areas if there is no wind and a temperature inversion occurs. The lack of air movement and higher temperatures create a potentially hazardous situation. On the other hand, too much wind creates a strong potential for drift onto people and nontarget crops. Assess the whole situation prior to handling any pesticide.

Use of engineering controls, such as closed systems and enclosed cabs, are always preferred over the use of personal protective equipment (PPE), such as a respirator, rainsuit, etc. In many situations, when engineering controls are used, handlers can wear less PPE. Substitutions allowed when using engineering controls are found in Pesticide Safety Information Series (PSIS) A-3, Table 1.

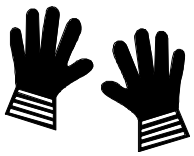
Hand pouring and moving (transporting) pesticide concentrates present the greatest hazard to the people involved. After a pesticide is mixed and loaded into the application equipment to be applied as a dilute liquid spray, the hazards decrease a little. However, even when handling the dilute solution, you should always try to avoid getting wet with the spray, regardless of the signal word on the label.

Specific Safety Precautions to Follow:

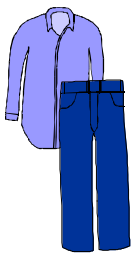
- Eye protection is required for most activities involving mixing/loading, application, equipment maintenance and flagging. There are exemptions for injection or incorporation of pesticides in the soil, having spray nozzles below the applicator and pointed downward, working in an enclosed cab, some applications of vertebrate baits or solid fumigants and applying non-insecticidal lures.

- Protective eyewear includes goggles, safety glasses (with brow and temple protection), a face shield, or full face mask (part of respiratory protection). Pilots can use a visor for eye protection. Regular eyeglasses and sunglasses DO NOT provide adequate eye protection.
- Employees involved in mixing and loading pesticides, pesticide equipment maintenance and hand application (including hand-held equipment) of pesticides must be provided with and use gloves.

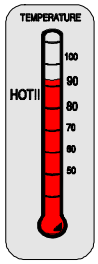
- Your employer must provide clean or new gloves each day.
- If the label does not list the type of glove needed, you must use gloves made of rubber, neoprene or other chemical-resistant material.



- In rare cases when the label specifically states that the handler not use gloves, they must not be worn.
- Wear respiratory protection when using pesticides that are toxic when inhaled, such as fumigants, powders, dusts, and some liquids.
- The type of respiratory protection required will be on the pesticide label.
- Your employer must have a written procedure for selecting, fitting, cleaning, sanitizing and maintaining respiratory equipment. See PSIS A-5 for additional information on respiratory protection.
- Some medical conditions, such as heart and lung disease, may prevent you from using respiratory protection. If you have these conditions, a physician must examine you prior to using respirators.
- Respiratory protection is also required for most handling activities involving pesticides on the Minimal Exposure Pesticide list (some exemptions exist). PSIS A-10 contains more information on Minimal Exposure Pesticides.
- A closed system is required to be used by all employees mixing/loading liquid pesticides or liquid mixes made from dry pesticides with the signal word "DANGER" on the label. See PSIS A-3 for more information on closed systems.
- If you handle pesticides with the signal word "DANGER" or "WARNING" on the label, your employer must provide you with clean coveralls (a one- or two-piece garment with long-sleeves and long pants) every day these pesticides are used. (This does not apply to those who handle fumigants, unless the label specifically requires use of coveralls.)



- If the pesticide label or California regulations require the use of chemical-resistant protection, your employer must provide a clean chemical-resistant suit, apron (if specified), footwear and headgear, that covers the body, feet and head.
- Due to the high temperatures that often exist in California, heat stress from use of chemical resistant clothing may present a greater hazard than pesticide exposure. In the absence of engineering controls, such as air-conditioned cabs, applications should be made at night or during the cooler portions of the day.
- If required to use a chemical resistant suit, you must not work in temperatures above 80°F in daylight hours or 85° during nighttime hours, unless wearing a cooled suit. Some exemptions from the chemical resistant clothing requirements exist for handlers (see PSIS A-3).



- Your employer must provide a place to change clothes and wash at the end of the day.
- Your employer must provide adequate water, soap and towels for washing your hands and face. They also must supply water for emergency eye flushing and washing the entire body in case of an accident.

Training:

California regulations require employees to be adequately trained before they handle pesticides. Your employer must have a written training program for employees who handle pesticides. For each pesticide or chemical group of pesticides, your training must include:

- the meaning of precautionary statements on the pesticide label
- information on the immediate and long-term hazards of the pesticides to be used
- routes pesticides can enter the body
- signs and symptoms of poisoning
- emergency first aid
- how to obtain emergency medical care
- routine and emergency decontamination procedures
- need for, limitations, use and cleaning of PPE
- prevention, symptoms and first aid for heat-related illness
- safety requirements and procedures
- environmental concerns
- instructions not to take pesticides or containers home
- applicable regulations, Material Safety Data Sheets, and PSIS leaflets
- the purpose of medical supervision, if applicable
- location of the written Hazard Communication Information (PSIS A-8)
- the employee's rights.

This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference is found in the California Code of Regulations, Title 3. The words "must" and "should" as used in the text are not the same. The word "must" means the action is required and comes from California regulations. The word "should" means additional handling practices that are recommended to reduce exposure.

Click here to PRINT

Pesticide Safety Information Series A

Worker Health and Safety Branch

A-2 PESTICIDE STORAGE, TRANSPORTATION AND DISPOSAL
In Agricultural Settings

General Information:

This leaflet describes general methods and requirements for proper storage, transportation, and disposal of pesticides and containers. The following simple precautions will drastically reduce the number of accidental pesticide poisonings, especially those involving children.

- Keep pesticides in their original containers.
- Never put pesticides in containers used for food, drink, or household products.
- DO NOT take home or use around your home any pesticide used at work.

Storage:

Properly store or keep pesticides and empty containers under direct personal control at all times. Direct personal control means a responsible person who can prevent contact by unapproved persons. A responsible person must have the pesticide(s) in sight, if under direct personal control and adjacent to a road or populated area. Acceptable pesticide storage includes:

- a locked, fenced area
- a lockable storage compartment
- a locked truck or trailer with side racks (the tops of the racks should be a minimum of six feet above the ground).

Keep storage areas clean, dry, ventilated and adequately lighted. Read and follow storage requirements explained on the label. If pesticides are stored with fertilizers, keep the two separated. Pesticides and fertilizers might react chemically and result in a fire. If pesticides contaminate fertilizers, there also exists the possibility of crop damage or residues on produce sent to market. Do not store pesticides near food, feed or personal protective equipment because of contamination.

Your employer may need a hazardous waste facility permit, if he/she stores pesticide waste, such as old products or unrinsed containers. For more information about specific requirements, contact the California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control. The telephone number can be found in the Government Pages of your telephone book.

Storage Posting Requirements. Post warning signs on all storage areas containing pesticides (or empty containers) with the signal words "DANGER" or "WARNING" on the label. Post signs on all directions of possible approach. You must be able to read the sign from 25 feet away. These signs must state:

DANGER
POISON STORAGE AREA
ALL UNAUTHORIZED PERSONS KEEP OUT
KEEP DOOR LOCKED WHEN NOT IN USE

Transportation:

To transport pesticides safely you must follow these simple procedures.

- Do not transport pesticides in the same compartment with a person, food, or animal feed.
- Transport pesticides in a secure upright position.
- Tightly close containers to prevent spillage.
- All containers must be labeled.
- This labeling must be the original product labeling or service container labeling.
- Service container labeling requires the name and address of the person responsible for the container, the common name of the pesticide and the signal word from the original label.

There may be other regulations to follow when transporting hazardous materials. As a general rule, consult the California Highway Patrol, Motor Carrier Safety Unit when transporting more pesticides than you will use in a few days. Their telephone number can be found in the Government Pages of your telephone book.

Rinsing:

All containers under 28 gallons, must be rinsed at the time of use, unless they are returned to the registrant or the pesticide is not diluted during use. There are two rinsing procedures. Follow one of them to ensure you have properly rinsed containers.

Procedure #1:

1. For containers smaller than 5 gallons, use enough water to fill the container ¼ full. For larger containers, use enough water to fill it one-fifth full.
2. Put the appropriate amount of water into the container. Close the container securely and agitate.
3. Drain the solution into the mix tank. Allow the container to empty completely.
4. Repeat steps 1 - 3 a minimum of 2 more times.

Procedure #2:

1. Turn the empty container over and place the opening over a nozzle. This nozzle must be located in the opening of the mix tank so the liquid will drain into the tank. The nozzle must be able to rinse all inner surfaces of the container.
2. Turn the nozzle on and rinse until the water coming from the container is clear. Use a minimum of ½ the container volume of water.

You may use other rinsing procedures, if they have been approved by the Department of Pesticide Regulation.

Disposal:

Dispose of all empty pesticide containers in a manner approved by the Cal/EPA, Department of Toxic Substances Control. Take all glass, plastic, or metal containers to an approved disposal site. DO NOT BURY ANY PESTICIDE CONTAINER.

For information on local requirements, contact the local agricultural commissioner. In many counties, people must possess a permit or certificate issued by the commissioner to dispose of rinsed containers.

This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference can be found in the California Code of Regulations, Title 3. The words "must" and "should" used in the text are not the same. The word "must" means the action is required and comes from California regulations. The word "should" means additional handling practices that are recommended to further reduce exposure.

Click here to PRINT

Pesticide Safety Information Series A

Worker Health and Safety Branch

A-3 ENGINEERING CONTROLS IN AGRICULTURAL SETTINGS
(Closed Systems, Enclosed Cabs, Water Soluble Packaging)

General Information:

Engineering controls are methods used to reduce exposure (closed system, enclosed cab, etc.) other than personal protective equipment (respirators, gloves, etc.). Hand-pouring highly toxic pesticides is a very hazardous activity, and has resulted in many serious human illnesses and injuries. In addition, application of very toxic pesticides by unprotected persons has also resulted in many pesticide-related illnesses and injuries. Proper use of engineering controls, such as closed systems, enclosed cabs and water soluble packaging, reduces the potential for human exposure. On the other hand, improper use, cleaning or maintenance of these systems, can also lead to excess exposure. In many instances, substitution of the personal protective equipment (PPE) required by the pesticide label and California regulations is allowed when properly using engineering controls (see Table 1).

Closed Systems:

California pesticide worker safety regulations require closed system use when:

- employees handle liquid pesticides or liquid mixes or dilutions of pesticides displaying the signal word "DANGER" on the label
- employees handle any minimal exposure pesticide.

The closed system requirement applies to all employees who use these pesticides for the production of an agricultural crop. There is an exemption that allows employees to handle up to 1 gallon of product per day in original containers of up to 1 gallon in size without using a closed system.

A "closed system" is a procedure for removing a pesticide from its original container, rinsing the emptied container, and transferring the pesticide and rinse solution through connecting hoses, pipes and couplings that are sufficiently tight to prevent exposure of any person to the pesticide or rinse solution. No rinsing is required when the pesticide is used without dilution or the container is a returnable or reusable container that will be sent back to the registrant. A closed transfer system for the dilute mixture is required if the pesticide label displays word "Danger".

If you use a closed system, you must receive training in the use of the closed system and safety precautions necessary during use.

You must wear PPE as required by the label or California regulations. Some substitutions for label-required PPE are allowed when using a closed system (Table 1). All PPE required by the pesticide label must be present at the work site for emergency use. Eye protection and gloves are still required in some instances while using a closed system (see Table 1 for exemptions).

California's Closed System Criteria. To meet California's requirements, a closed system must:

- remove the pesticide from the original container
- rinse the container
- transfer the pesticide to the mix tank
- be made of materials appropriate for use with pesticides and a pressurized system
- have gauges protected against breakage
- adequately measure the pesticide used
- have shut-off valves to prevent chemical from spilling when the hose is disconnected.

Do not remove the probe from the container unless the container is empty and rinsed, the pesticide was

used undiluted and the container is empty, or the probe has been approved for removal from partially empty containers. For more details on closed system criteria, contact the California Environmental Protection Agency, Department of Pesticide Regulation (DPR). You may obtain a list of closed systems, which have been evaluated and found to meet these criteria, from DPR ((916) 445-3920).

The system must be cleaned and maintained according to the manufacturer's instructions. If the system is not a commercially produced system, it must be maintained on a regular basis. A record of cleaning and maintenance must be kept.

Water Soluble Packaging:

Use of pesticides in water soluble packaging (WSP) is considered equivalent to mixing with a closed system. However, dilutions of pesticides in WSP with the signal word "Danger" on the label must be transferred (i.e., from a mix tank to the application vehicle tank) via a closed system. DO NOT cut open WSP to use a partial package. This invalidates the closed system equivalency and puts the mixer at a high risk of overexposure.

Enclosed Cabs:

Proper use of enclosed cabs can reduce exposure to applicators, pilots and flaggers. An enclosed cab is a chemical resistant barrier that completely surrounds the occupant of the cab and prevents contact with pesticides or treated surfaces outside the cab. Enclosed cabs can include a crop duster cockpit, a closed cab on a tractor, or a truck or car with the windows and doors closed. There are two types of enclosed cabs:

- Cabs with only the physical barriers (doors, windows, etc.) to prevent exposure
- Enclosed cabs acceptable for respiratory protection. This cab incorporates a dust/mist filtering and/or vapor/gas purification system, in addition to the physical barrier. These cabs must meet certain criteria and be approved by the director of the DPR.

This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference is found in the California Code of Regulations, Title 3. The words "must" and "should" used in the text are not the same. The word "must" means the action is required and comes from California regulations. The word "should" means additional handling practices that are recommended to further reduce exposure.

Table 1: Allowed Substitutions when Using Engineering Controls

When using the following:	Handlers may substitute:*	For the following:
Closed system for pesticides with "Danger" or "Warning"	Coveralls, chemical resistant gloves and chemical resistant apron	PPE required on the pesticide labeling
Closed system for pesticides with "Caution"	Work clothing	PPE required on the pesticide labeling
Closed system under positive pressure	Protective eyewear**	
Mixing pesticides in water soluble packets	Use in water soluble packets***	Use of a closed mixing system
Enclosed cab	Work clothing and respiratory protection required	PPE required on the pesticide labeling
Enclosed cab acceptable for respiratory protection	Work clothing	PPE required on the pesticide labeling
Any pesticide	Chemical resistant suit	Coveralls and a chemical resistant apron

* For any substitution, all PPE required by the label must be available in case of an emergency

** Protective eyewear is required in addition to coveralls, chemical resistant gloves and apron for pesticides with "Danger" or "Warning" or in addition to work clothing for pesticides with "Caution" on the label

*** Using pesticides in water soluble packets is equivalent to mixing with a closed system. However, transfer from mix tank to application tank must be made with closed transfer equipment.

Click here to PRINT

Pesticide Safety Information Series A

Worker Health and Safety Branch

A-4 FIRST AID AND DECONTAMINATION

In Agricultural Settings

This leaflet provides basic first aid for employees who handle pesticides. The information supplements first aid statements found on pesticide labels. This leaflet **does not** meet the employer's requirement for emergency medical care nor for making prior arrangements for emergency medical care.

If You Become Sick Working With Pesticides:

If you become ill while working with pesticides, stop work immediately. Notify your supervisor or a fellow employee that you are ill. Take the following steps to eliminate sources of continued pesticide exposure.

- Go to a source of fresh air.
- Remove work clothing.
- Shower completely, including your hair, and change into clean clothing.
- DO NOT put contaminated clothing back on until they are properly washed.
- If shower facilities are not immediately available, use the closest available clean water source to wash your body. This may be water from a shower, faucet, hose, or bottle.

In all cases, the instructions should be: DON'T WAIT - DECONTAMINATE IMMEDIATELY. **Take** the person to the nearest emergency medical care facility. Do not leave the person alone or allow them to drive.

If a person collapses while working with pesticides:

- immediately remove the person from the pesticide use area
- give any necessary resuscitation
- call 911 for emergency help, if a telephone is available
- warn emergency workers that the person may be contaminated with pesticides.

REMEMBER: A sudden collapse may be due to a heart attack or other medical emergency not related to pesticide exposure

All persons should receive cardiopulmonary resuscitation (CPR) training. The American Red Cross and the American Heart Association teach CPR. Contact the local chapter of either of these organizations to make arrangements for training individuals or groups.

Take the following steps when caring for individuals who become ill while working with pesticides:

- stop exposure
- resuscitate (if necessary) and decontaminate (remove contaminated clothing and wash their skin)
- make sure the person is taken to the nearest emergency medical care facility.

It is important to supply the physician or emergency room personnel with as much information as possible regarding the circumstances of exposure. Provide the physician with the name of the pesticide the victim was exposed to or handling. If possible, take a clean copy of the product label(s) to the physician with the victim. If a label cannot be taken in with the victim, write down the exact name of the product, EPA registration number and active ingredients and give it to the physician. As a last resort, take a clean, empty, labeled container or a sealed, labeled container to the physician along with the victim. (Exposure of emergency care or hospital personnel can occur if a container with pesticides is dropped and broken.)

Sudden Contamination With Pesticides:

Pesticides can be absorbed into the body by:

- breathing in dust or vapors
- skin or eye contact
- swallowing.

California Environmental Protection Agency
Department of Pesticide Regulation
830 K Street, Sacramento, California 95814-3510

Breathing Dust or Vapors. In the event of a sudden, unexpected release of pesticide dust or vapor:

- leave the area immediately
- if in an open area, go upwind at least 100 feet away from the dust or vapor
- if in a confined area, leave the area immediately and go outdoors or to a well-ventilated area away from the dust or vapor
- immediately move any person overcome by dust or vapors to an area away from the pesticides
- proceed as described for persons who suffer from sudden collapse while working with pesticides.

Pesticides In the Eyes.

- Immediately rinse the eyes with water.
- Hold the eyelids open and slowly pour water over the eyes.
- Never use a forceful stream of water directed into the eye, as damage may occur.
- Use water flowing slowly and gently from a faucet or hose.
- Rinse the eye for at least 15 minutes.
- If symptoms of pain, discomfort, or visual problems are present after thoroughly rinsing the eyes, immediately take the affected person to the nearest emergency medical care facility.


EYE WASH

Pesticides Spilled On the Clothing or Skin. Your skin is **not** an absolute barrier that prevents pesticides from getting into your body. Pesticides (and other chemicals) can be absorbed through your skin and into your body. Absorption of some chemicals is very rapid, while absorption of others is slow. It is important to remove any pesticide that comes into contact with the body whether on your skin or clothing. Many pesticides can eventually penetrate protective clothing, even if it is waterproof. All persons should remember the following procedures.

- Immediately remove all contaminated clothing.
- Wash all exposed skin areas with soap and water.
- Properly wash contaminated clothing before wearing them again.
- If illness symptoms occur following a spill of pesticides onto the clothing or skin, immediately take the affected person to the nearest emergency medical care facility.

Pesticides Are Swallowed.

- The victim should drink sips of water or milk.
- Do **NOT** induce vomiting in an unconscious or semi-alert person.

- Call 911, a physician or the nearest poison control center for further advice.
- **Check the pesticide label**. Some pesticide labels will tell you **not** to make the person vomit. Vomiting after swallowing caustic chemicals may make the condition worse.
- Do **NOT** give fluids to an unconscious or semi-alert person.
- Immediately take unconscious or semi-alert persons to the nearest emergency medical care facility.
- To induce vomiting in an adult, give one ounce of syrup of ipecac, if it is immediately available. To induce vomiting in children, proportionately reduce the dose of ipecac syrup (two to four teaspoonfuls). After giving syrup of ipecac, vomiting is usually delayed by 15 to 30 minutes.
- Do **NOT** administer salt water or mustard solutions to induce vomiting as may be recommended on some old pesticide labels. Salt and mustard solutions may be too dangerous to use for this purpose.

Additional Useful Information:

Your employer must post at the work site the telephone number, address and physical location of the facility where emergency care is available.

Many areas are served by regional poison control centers; you can contact any poison control center in California by calling 1-800-764-7661. Immediate contact with the poison control center will provide professional guidance on how to proceed with first aid and resuscitation measures. Provide as much information as possible regarding what happened and the pesticides involved. If a victim is being transported to an emergency care facility, advance notification to the facility by the poison center will allow the emergency room to prepare for the victim.

Pesticide Safety Information Series A

Worker Health and Safety Branch

Click here to PRINT

A-5 RESPIRATORY PROTECTION

In Agricultural Settings

General Information:

This leaflet provides basic information to pesticide users on respiratory protection and helps you to comply with California's respiratory protection regulations (Title 3 California Code of Regulations section 6738).

Regulations require employers to have a written respiratory protection program at the work site. The program must cover selection, fitting, use, inspection, maintenance and cleaning of respirators. Adoption of the content of this Pesticide Safety Information Series (PSIS) leaflet meets the minimum requirements for the written program. Appendix 1 contains sample written procedures.

Conditions Requiring Respiratory Protection:

Engineering controls offer the best way to control airborne hazards. Examples of engineering controls include enclosure or confinement of the operation generating the hazard, ventilation to keep the airborne concentration below accepted levels, or substitution of less toxic materials. In some situations, the use of engineering controls, such as closed systems or enclosed cabs, may exempt the worker from wearing respiratory protection. (PSIS A-3 discusses these exemptions.) Often, pesticide use creates a hazardous working environment. If hazardous pesticide concentrations cannot be controlled in other ways, you need to use personal respiratory protection. You may also need respiratory protection in emergency situations where the exposure is relatively brief.

Federal and state laws require pesticide labels to contain safety precautions. The label will include requirements for respiratory protection, if needed. If you are exposed to mist or spray, respiratory protection may be necessary when applying products with labels that recommend "avoid spray".

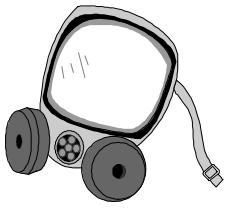
Your employer must provide personal respiratory equipment required and you must use the equipment provided. Your employer must provide respiratory equipment approved for the particular exposure by the National Institute for Occupational Safety and Health (NIOSH).

Training:

You must receive training initially and annually in the need, use, sanitary care and limitations of the respiratory equipment you may have to use.

Selection and Fitting of Respirators:

Proper respirator selection is critical. Pesticide labels are the primary source of information on the type of respiratory protection needed. With information from the label, a safety equipment supplier will be able to provide your employer with the correct type of respiratory equipment. When exposed to pesticides that irritate the eyes, nose or throat, wear a full-face respirator for protection from irritants. If using air-purifying respirators, the air-purifying element (filter or cartridge) must be approved for use against the specific hazard by NIOSH. For additional help in the selection process, consult one of the sources listed below.



Respirators come in different sizes to accommodate different sized faces. Every respirator wearer must receive training on fitting and testing the respiratory equipment they use. When fitting a respirator, wear it in normal, uncontaminated air, to get accustomed to it. Then wear the respirator in a test atmosphere.

Maintenance and Sanitation:

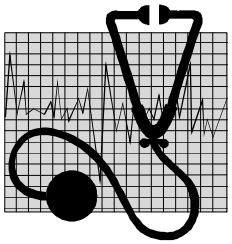
Your employer must repair or replace respiratory equipment as necessary due to wear and deterioration. A trained person should regularly clean and inspect frequently used respirators. Regular cleaning and inspection prolongs the useful life and assures the wearer that the respirator works as efficiently as possible. For personal hygiene and communicable disease considerations, do not pass respirators from one individual to another without cleaning and sanitizing. Avoid this situation by assigning a respirator to each wearer.

When not in use, store respirators so the facepiece does not become deformed and is protected from excess exposure to dust, sunlight, extreme temperatures, moisture or damaging chemicals. All the above factors will severely limit the useful life of the respirator. Plastic containers with lids provide adequate storage for respirators.

Prior to use, inspect respirators maintained for emergency situations, such as canister gas masks and self-contained breathing apparatus (SCBA). If not used within a month, inspect and test this emergency equipment to assure reliable operation when needed. During an inspection, look to ensure cleanliness and that all components are present and operable.

Medical Evaluation:

Breathing through a respirator may require more effort than normal breathing. For some individuals, this effort is extremely difficult for various reasons. If required to wear a respirator, your employer must inform you that some medical limitations may interfere with use of respiratory protection. Some of those medical limitations include high blood pressure, heart disease, lung disease or a perforated ear drum. If you have such a condition, a physician must examine you to determine if you are physically able to perform assigned work using respiratory equipment. The physician should determine what health and physical conditions are pertinent. Your employer must follow the physician's written recommendation concerning your capability to wear respiratory equipment.



Your employer must keep written evidence on file that you were informed. Before an employee is required to perform any work requiring respiratory protection, a record of the physician's evaluation must be on file for those employees who indicate a possible medical limitation.

Limitations:

Respirators have limitations. They cannot adequately protect a person from all contaminants under all conditions. In general, if properly fitted and worn, the typical half-face, air-purifying respirator provides a protection factor of 10. A full-face, air-purifying respirator provides a protection factor of 50. The protection factor measures the protection provided to the wearer and indicates the efficiency of the respirator in reducing airborne contaminants inhaled.

Air-purifying respirator cartridges or canisters have a limited capacity to protect against toxic gases and vapors in the air. Theoretically, cartridges and canisters are effective against toxic vapors and gases until their capacity is exhausted; then the vapor or gas passes through the cartridge or canister and into the inside of the respirator. If you detect an odor or taste, or feel eye or throat irritation, leave the hazardous area immediately; go to a safe area that contains uncontaminated air. Then inspect your respirator for any physical failure. You must change the respirator cartridge or canister if you detect no physical problems. Because canisters and cartridges have a limited capacity and many pesticides lack warning properties (odor or irritation), DPR regulations require that air-purifying elements be replaced according to the most frequent of the following:

- pesticide labeling directions
- equipment manufacturer's recommendations
- at first indication of odor, taste or irritation
- at the end of each day's work period.

Air purifying respirators (canister or cartridge) do not provide oxygen to the wearer. Do not use these respirators in situations where the oxygen content of

the air might be low. In low oxygen situations, use equipment capable of providing an independent source of breathing quality air, such as a self-contained breathing apparatus (SCBA) or an air-line respirator.

Employees with facial hair cannot work where respiratory protection is required unless provided with a respirator that does not require a face-to-facepiece seal for proper operation.

Respirators only protect from inhalation exposure. For many situations when pesticides are used, protection from dermal exposure may also be necessary.

Information Sources:

Additional information can be obtained from several organizations and individuals. Some sources are listed for your use.

1. Safety equipment retailers - see local telephone directory yellow pages.
2. Occupational safety and health consultants.
3. Department of Pesticide Regulation, Worker Health and Safety Branch, 830 K Street, Sacramento, California 95814, (916) 445-4222.
4. Cal/OSHA Consultation Service - see listing under State Government Offices, Industrial Relations Department, in local telephone directory.
5. County Agricultural Commissioner - see listing under County Government Offices, Agricultural Commissioner.
6. County Health Department.
7. Insurance carriers.

This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference is found in the California Code of Regulations, Title 3. The words "must" and "should" used in the text are not the same. The word "must" means the action is required and comes from California regulations. The word "should" means additional handling practices that are recommended to further reduce exposure.

SAMPLE WRITTEN SITE SPECIFIC OPERATING PROCEDURES FOR THE SELECTION AND USE OF RESPIRATORS

RESPIRATORY PROTECTION PROGRAM

Company Name_____

Address_____

_____

Person Responsible for Program_____

I. Selection of Respirators

For the following pesticide related uses, we require respirator use:

_____

_____

We base our selection of respirators on:

_____

Personnel and selected respirator(s)

Employee	Respirator
_____	_____
_____	_____
_____	_____

Additionally, we have an area(s) or time(s) where emergency respiratory protection is necessary.

_____

For this use, we selected the following respirator(s):

_____

II. Use of Respirators

The above employees received respiratory protection training. ___(instructor name)_____ conducted the initial training on _____(date)_____. Attached is a list of more recent training.

On a periodic basis, _____(name)_____ conducts routine inspections of respiratory gear. Inspection of equipment kept for emergency occurs at least monthly. A record of the most recent inspection is kept on the respirator or its storage container.

EMPLOYEE STATEMENT OF MEDICAL CONDITION

_____

(Print Employee Name)

In accordance of Section 6738 of the California Code of Regulations, to the best of my knowledge, I have (_), have no (_) medical conditions which would interfere with wearing a respirator while engaged in potential pesticide exposure situations. I understand that heart disease, high blood pressure, lung disease or presence of a perforated ear drum require specific medical evaluation by a physician before safe use of a respirator can be determined.

_____ _____

(Signature of Employee) (Date)

REPORT OF MEDICAL EVALUATION

In accordance with Section 6738 of the California Code of Regulations, I examined the employee listed above. For the employee named above, there is no current medical contraindication to wearing a respirator while working in potential pesticide exposure environments.

Other Comments:_____

_____

_____

_____

(Printed Physician's Name)

_____ _____

(Physician's Signature) (Date)

Click here to PRINT

Pesticide Safety Information Series A

Worker Health and Safety Branch

A-6 SUMMARY OF WORKER SAFETY REGULATIONS FOR THE AGRICULTURAL SETTING

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 3, DIVISION 6

The pesticide worker safety regulations specify safe work practices for employees who handle pesticides or work in treated areas. The term "handle" refers to any activity related to the application of pesticides. Handle includes mixing, loading, applying, repairing or cleaning contaminated equipment, and handling unrinsed containers. The Department of Pesticide Regulation and the local agricultural commissioner enforce the worker safety regulations. Important requirements of the regulations follow.

Employer/Employee Responsibilities (CCR 6702):

Your employer must:

- know the regulations and requirements on pesticide label
- tell you, in a language you understand, about the pesticides used, pesticide safety hazards, personal protective equipment required, other equipment used, work procedures, and pesticide safety regulations
- ensure that their employees work safely and follow all safety rules.

Employees must:

- use the personal protective equipment (PPE)
- follow safety rules in regulations and on pesticide labeling.

Hazard Communication (CCR 6723, 6723.1, 6761, 6761.1):

Hazard communication ensures that you know the hazards you may face and what to do to protect yourself from those hazards. Through proper hazard communication, you will know about the hazards, safe work practices and where records are kept. Pesticide Safety Information Series (PSIS) leaflets A-8 and A-9 are the written hazard communication programs for handlers and field workers, respectively.

Your employer must display PSIS A-8 and A-9 for you to read. Your employer must also display the following for pesticide handlers and field workers to read:

- identification of the treated area
- time and date of applications
- restricted entry interval (REI)
- pesticide product name, active ingredient and EPA registration number.

Your employer must make available:

- Material Safety Data Sheets (MSDS), if available, for the pesticides used
- PSIS leaflets applicable to the use situation.

Training (CCR 6724, 6764, 6770):

Employees who handle pesticides must receive adequate training in the use of pesticides. Training must occur before the employee begins to handle pesticides. Handlers must receive refresher training each year. Training of handlers must include the following for each pesticide or group of chemically similar pesticides (such as organophosphates):

- the meaning of information on the pesticide label concerning human health effects
- hazards of the pesticide, including acute and long term effects
- pesticide poisoning symptoms
- routes pesticides can enter the body
- emergency first aid
- how to get emergency medical care
- routine and emergency decontamination procedures
- need, limitations, use and cleaning of PPE

- prevention, recognition and first aid for heat-related illnesses
- safety requirements for handling pesticides
- environmental concerns
- warnings about taking pesticides home
- regulatory requirements, MSDS, and PSIS
- purpose and requirements of medical supervision, when applicable
- location of the written hazard communication program, PSIS leaflets and MSDSs
- your rights as an employee.

Once training is received, then you must sign the training record. Handler training records must be kept at the work headquarters.

Field workers must receive training every 5 years; and must receive training before working in treated fields. The training must include:

- importance of routine washing after exposure
- the meaning of posting and REIs
- where exposure to pesticides might occur
- routes of exposure
- acute and long term effects of pesticides
- symptoms of overexposure
- first aid and where to get emergency medical care
- warnings about taking pesticides home
- the hazard communication program
- your rights as an employee.

You have the right to receive information about pesticides to which you may be exposed (or it can be given to your physician). You cannot be fired for exercising your rights.

Labels and Other Warnings (CCR 6602, 6618, 6674, 6678, 6776):

Pesticide labels must be available at the work site. If pesticides are transferred from their original container, the new container must be labeled with the identity of the pesticide, the signal word from the product label and the name of the person or firm responsible.

Before applying pesticides, the applicator must notify the farmer of the application before it takes place. The notice must include:

- date and time of the application
- name, EPA registration number and active ingredient of the pesticide used
- safety precautions required by label or regulations
- location of the area to be treated
- the REI.

The farmer is responsible for warning employees and contractors who may enter or walk within ¼ mile of a treated area. The warning must include:

- location of the treated area
- any REI
- instructions not to enter the field until the REI expires.

The farmer may substitute posting of the treated field for the oral warning, if the label does not require both oral warnings and field posting.

Use Records (CCR 6624, 6728, 6778):

Records of when and where pesticides were used must be kept for pesticides used on agricultural crops. The employer must have records of employee exposure to organophosphate and N-methyl carbamate pesticides used in the production of an agricultural crop. For each person, these records must show the name of the pesticide and the date of the exposure.

Emergency Medical Care (CCR 6726, 6766):

Your employer must make prior arrangements for emergency medical care, and tell you the location of the medical facility in case someone is sick or injured on the job. If you handle pesticides, your employer must post at the work site (or on the work vehicle if there is no fixed work site) the name, address and telephone number of the physician, clinic or emergency room able to provide care. Your employer must make sure that you are taken to a medical care facility if you become injured or ill while handling pesticides or exposed to pesticide residues on the job.

Medical Supervision (CCR 6728):

Your employer must provide medical supervision that includes periodic cholinesterase blood tests, if all the following conditions are met:

- you mix, load or apply organophosphate or N-methyl carbamate pesticides

- the pesticides are used on agricultural crops
- the pesticides have signal word "DANGER" or "WARNING" on the label
- you use these pesticides for more than 6 days in a 30-day period.

PSIS A-11 provides a complete explanation of medical supervision.

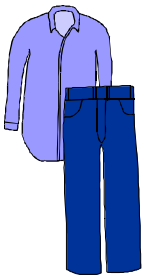
Decontamination & Hygiene (CCR 6732, 6734, 6793):

If you handle pesticides used on agricultural crops, your employer must provide enough water, soap and towels for routine washing of your hands and face. In addition, for emergencies, water must be available at the mix/load site and within ¼ mile of other handlers to flush your eyes and wash your body. Store wash water separate from water used for mixing with pesticides. Handlers must carry (or it can be on the application vehicle) one pint of water for emergency eye flushing, if the label requires the use of eye protection.

Your employer must provide a place to wash and change clothing after work, if you handle pesticides.

Coveralls (CCR 6736, 6793):

Your employer must provided clean coveralls (1- or 2-piece garment that covers your body, except the head, hands and feet) each day you handle pesticides having the signal word "DANGER" or "WARNING" on the label or any minimal exposure pesticide. Your employer must wash those coveralls.



Engineering Controls (CCR 6742, 6746, 6793):

Engineering controls are methods used to reduce exposure (closed system, enclosed cab, etc.) other than personal protective equipment (respirators, gloves, etc.). Handlers may substitute protective clothing when using certain engineering controls. See PSIS A-3 for further explanation of engineering controls and allowed substitutions.

All application equipment must be inspected prior to use. Your employer must make any necessary repairs prior to use. Tanks on pesticide equipment must have covers to prevent spills.

Employees who mix and load liquid pesticide products or liquid mixes of pesticide products with the signal word "DANGER" or any minimal exposure pesticide must use closed systems. When loading pesticides with the signal word "DANGER" or "WARNING," the loading hose must have a shut-off device on the end to prevent spills when the hose is removed from the application vehicle tank.

Personal Protective Equipment (CCR 6738, 6793):

Your employer must provide all necessary personal protective equipment (PPE) and ensure it is clean and in proper repair. You must not take PPE home to be washed. Generally, the necessary PPE is listed on label of the pesticide used. However, in California there are additional requirements that may not appear on labels.

Eye protection - Eye protection is required in the following situations:

- when stated on the label
- mixing/loading
- ground application, except when injecting or incorporating pesticides into the soil, working in an enclosed cab or when spray nozzles are located below you and pointed downward
- hand application, except application of vertebrate baits, using solid fumigants, baiting insect monitoring traps or applying non-insecticidal lures;
- adjusting, cleaning or repairing pesticide-handling equipment
- flagging, except when in an enclosed cab.

Eye protection can include safety glasses (with front, brow and temple protection), goggles, face shield, or a full-face mask as part of respiratory protection. Regular eyeglasses or sunglasses DO NOT meet this requirement.

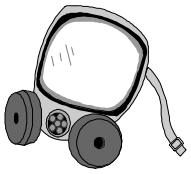
Gloves - Gloves must be worn when:

- required by the pesticide label
- mixing and loading
- all hand application activities (except vertebrate pest control using long-handled tools).

- adjusting, cleaning or repairing contaminated equipment

Gloves must be replaced or washed every day. It is especially important that gloves be washed on the inside and the outside, since residue can accumulate inside. DO NOT use leather or cotton gloves, unless expressly permitted by the pesticide label.

Respiratory Equipment - When respiratory protection is required, your employer must adopt written procedures for selecting, fitting, cleaning and maintaining the equipment. A physician must evaluate employees with certain medical conditions, such as heart or lung disease, before being assigned to this kind of work. Respiratory protection is more fully explained in PSIS A-5.



Chemical Resistant Clothing - Pesticides with unusual hazards require the use of chemical resistant suits, footwear, head covering and/or apron. However, use of this kind of clothing in warm temperatures may result in heat stress. Since the hazards of the pesticide will not allow its use without this kind of protection, the following rule applies if wearing the chemical resistant suit: Employees are prohibited from using pesticides with this clothing requirement when the temperature is above 80^{O}F during the day or 85^{O}F at night unless they are provided with cooled chemical suits. Some substitutions are allowed for chemical resistant clothing when using engineering controls (see PSIS A-3).

Cleaning/Repairing Equipment (CCR 6744):

If you clean or repair pesticide-handling equipment, you must be fully informed of and protected from the hazards of working on that equipment.

Employee Contact (CCR 6730):

An employee working alone with pesticides having the signal word "DANGER" on the label must have contact with another person at least once every two hours during the day and once every hour at night.

Fumigants (CCR 6780, 6782, 6784):

Fumigants are pesticides used as a gas. A permissible exposure level (PEL) has been set for most fumigants. These PELs must not be exceeded. It is your employer's responsibility to know that you are not being overexposed or to provide you with approved respiratory protection. Where fumigants are used, your employer must have an accident response plan that tells you what to do in case of a spill, leak or fire. You must know what is in the plan.

You cannot detect some fumigants by odor, taste, irritation or sight. For these fumigants, your employer must know or anticipate possible exposure from routine work activities. This is done by monitoring the actual work site or using information from previous monitoring of similar procedures and situations. This will show your employer that one of three situations exist:

- your exposure does not exceed the PEL, in which case no respiratory protection is required
- your exposure will exceed the PEL, in which case approved respiratory protection is required
- your exposure is variable (that is, there are times when the levels exceed the PEL and times when it does not).

You must wear approved respiratory protection all of the uncertain times, unless there is continuous monitoring at the work site. If there is continuous monitoring, respiratory equipment is necessary only when monitors indicate air levels are over the PEL.

Two trained persons must be present when fumigating enclosed spaces. Warning signs must be posted prior to the fumigation of enclosed spaces. Two trained persons also need to be present during field fumigation with methyl bromide and during tarp removal (if used).

Restricted Entry Interval (CCR 6770, 6772, 6774):

A restricted entry interval (REI) is the period of time, following a pesticide application, when people are not allowed to go into the treated field for picking (hand-harvesting), thinning, weeding, tying, pruning, limb propping or similar work. REIs for many pesticides are stated on pesticide labels; others are established by regulation. Both must be observed.

Reentry for activities with no contact, such as operating tractors, is allowed if special protection is used to prevent exposure to residues. People incorporating pesticides into the soil during a REI

must wear the same PPE required for the applicator. People may enter the field during the REI for limited contact activities, such as irrigation, provided certain conditions are met. Those conditions include:

- both oral warning and field posting are not required by the label
- it has been at least 4 hours since the application
- inhalation exposure is below acceptable levels
- exposure is minimal and limited to the feet, lower legs, hands and forearms
- the person is wearing PPE required for early entry workers
- they do not work in treated fields for more than 8 hours
- the need for the activity is unforeseen.

Early Entry Requirements (CCR 6771):

If you enter a field prior to the expiration of the REI, you must be informed of the requirements on the label relating to:

- health hazards
- first aid
- symptoms of poisoning
- use of PPE required
- symptoms and first aid for heat-related illness
- the need for washing when out of the treated area.

Your employer must provide PPE required for early entry. You must not take PPE home to clean it; cleaning is the responsibility of your employer. One pint of water for eye flushing must be immediately accessible for each employee, if the pesticide label requires eye protection. Employers must provide early entry workers with soap, water and towels to wash when they remove their PPE.

Minimal Exposure Pesticides (CCR 6790-6793):

The following pesticides are on the minimal exposure pesticide (MEP) list:

- propargite (Omite®, Comite®)
- folpet
- bromoxynil (Buctril®)
- oxydemeton-methyl (Metasystox®-R).

The hazards of using these pesticides require special safety rules regardless of the toxicity category of the pesticide. These rules are:

- a change area must be provided
- washing facilities must be at all mix/load sites
- clean work clothing must be provided each day
- a closed system must be used for liquid pesticides or liquid dilutions of pesticides
- employees who handle MEPs must wear clean or new chemical resistant suits (except when using some engineering controls - see PSIS A-3)
- respiratory protection must be used when applying by hand or ground (except when using some engineering controls).

Exemptions:

If you work for a licensed pest control adviser or a registered professional forester and you received adequate training, are informed about any application and know how to contact your employer, the following provisions of the worker safety regulations do not apply: decontamination, emergency medical care, coveralls, personal protective equipment and field reentry.

The provisions of the worker safety regulations related to handlers do not apply if you use consumer products and your exposure is similar to expected consumer exposure.

You may examine a complete set of these regulations at your local county agricultural commissioner's office.

This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference is found in the California Code of Regulations, Title 3. The words "must" and "should" used in the text are not the same. The word "must" means the action is required and comes from California regulations. The word "should" means additional handling practices that are recommended to further reduce exposure.

Pesticide Safety Information Series A

Worker Health and Safety Branch

Click here to PRINT

A-7 LAUNDERING PESTICIDE CONTAMINATED CLOTHING FOLLOWING EXPOSURE TO AGRICULTURAL PESTICIDES

General Information:
This leaflet provides information about removing pesticide residues with non-commercial laundry machines (washing machines at home). If pesticide-contaminated clothing contacts other clothing in the wash, your family's clothing may become contaminated. In addition, persons handling that clothing may get pesticides on their skin, if not properly protected. Minimize exposure to pesticide residues by following the guidelines in this leaflet.

California pesticide worker safety regulations require employers to provide clean coveralls for each employee who handles pesticides (mixes, loads, applies, flags for an application and repairs or cleans pesticide-contaminated equipment) with the signal word "Warning" or "Danger" on the label. Coveralls are a one- or two-piece garment that covers the body except for the head, hands and feet. Your employer must ensure that you wear clean coveralls at the start of each workday and change out of their clothing and wash at the end of the workday when you handle pesticides with the signal word "Danger" or "Warning". You should not take potentially contaminated coveralls home. If your workday does not involve a return to your employer's headquarters, you must:

- remove your contaminated coveralls at work
- store them in a sealable container outside of the living quarters
- return them to your employer.

Always store contaminated personal protective equipment (PPE) separately from clean coveralls. It is your employer's responsibility to wash the coveralls, and to inform the laundry person that the clothing may be contaminated with pesticides and should be washed separately.

Normal work clothing can also become contaminated with pesticides (even under coveralls or other PPE). Field workers work clothing may become contaminated while working in treated fields. When washing any pesticide-contaminated clothing with home laundry equipment, prevent exposure of family members to unwashed clothing or the rinse water. Wash pesticide-contaminated clothing as soon as possible.

If a highly toxic pesticide concentrate is spilled on your clothing, take them off immediately. Do not launder; dispose of the clothes according to state and local laws. Throw away leather items contaminated with pesticides; they cannot be adequately cleaned.

Laundering Contaminated Clothing:
Consider the following measures when washing pesticide-contaminated clothing at home regardless of the signal word (Danger, Warning or Caution) on the pesticide label.

Precautions and Personal Protection.

- Wear rubber gloves when handling contaminated clothing.
- Keep all contaminated clothing, including under-garments, in closed plastic bags outside the house and out of the reach of children and pets, until ready to wash.
- DO NOT put contaminated clothing in the family laundry basket.
- Multiple washings of contaminated clothing may be necessary if contaminated with very toxic pesticides.
- Wash your hands immediately after handling pesticide-contaminated clothing.

Loading the Washer.

- Wash contaminated clothing separately from the rest of the family laundry.
- Where feasible, use a separate washer.
- If possible, dump the contaminated clothing directly into the washer from the plastic bag without hand contact.
- Keep the washing area well ventilated.

Load Size.

- Place only a few pieces of clothing into the washer at one time.
- It will help ensure good agitation.

Pre-wash.

- In an automatic washer, use a pre-soak cycle to dilute the pesticide and increase removal.
- Then run through the full wash cycle.
- If your washer doesn't have a pre-soak cycle, run through the wash cycle twice.

Water Level.

- Set the washer to the large or extra large load setting to flush clothing thoroughly and dilute any pesticide present.

Water Temperature.

- Use the HOT water setting.
- Hot water increases pesticide removal.

Wash Cycle.

- Use the LONGEST wash cycle.
- A double rinse is recommended.

Detergent.

- Use a HEAVY-DUTY liquid or powdered detergent as recommended on the package.
- If there is a stain, use a prewash stain and soil remover. (Remember to wear rubber gloves when handling the clothing.)

Water Hardness.

- Hard water can deactivate detergent, and thus can affect pesticide removal.
- Use of water softeners is recommended in areas with hard water.

Additives.

- Neither bleach nor ammonia seems to affect removal of most pesticides.
- Never use both; this combination forms a very toxic gas.

Cleaning the Washing Machine.

- After laundering pesticide-contaminated clothing, clean the washing machine by running it empty through a complete cycle, using hot water and detergent.

Drying.

- Line drying is the preferred method.
- It will not only prevent contamination of the dryer, but sunlight may also help degrade any remaining pesticide residues.
- When using a dryer, run it until the clothing is completely dry. After drying, run the empty dryer for about 10 minutes.

Tips for Reducing Pesticide Exposure of Family Members:

- Remove contaminated clothing at the work site and put in plastic bags.
- Empty pockets and cuffs at the work site.
- Shower and wash you hair at the end of the workday. Use clean water and soap.
- Inform the person doing the laundry at home that the clothing is pesticide-contaminated and how to launder it.

REMEMBER: It is your employer's responsibility to wash contaminated coveralls and other PPE that he provides for you to use on the job.

Click here to PRINT

Pesticide Safety Information Series A

Worker Health and Safety Branch

A-8 HAZARD COMMUNICATION INFORMATION FOR EMPLOYEES HANDLING PESTICIDES IN AGRICULTURAL SETTINGS

General:

This leaflet provides information on your right to know about work hazards and the Department of Pesticide Regulation (DPR) regulations on hazard communication in California.

Pesticides include a variety of products commonly used in agricultural, as well as, non-agricultural settings (such as landscaping, parks, restaurants or hospitals). Insecticides, herbicides, disinfectants and sanitizers are all types of pesticides.

The general purpose of hazard communication is to ensure that potential hazards are identified, and that you are informed about these hazards through training, container labeling, and other forms of warning. Your employer is responsible for knowing and telling you, in a language you understand, about specific pesticides you will be handling, and how you should protect yourself to safely handle them.

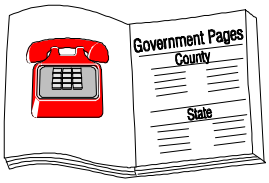
Worker Rights:

The law requires that you be told about potential hazards in your workplace. You must be trained to deal with them. As an employee, you have certain rights:

- You have the right to look at pesticide use records and Material Safety Data Sheets (MSDS)
- You have the right to file confidential complaints about unsafe work conditions without being punished or fired by your employer
- Whoever pays you must make plans for medical care and see that you are taken to the doctor if you get sick or injured on the job
- If you get sick or injured on the job, you have the right to file a claim for worker's compensation.

Your employer will explain these rights to you. If you need more help in understanding your rights, you may go to your local county agricultural commissioner's office, the local legal aid or worker's rights office or your union.

Pesticides are only one kind of hazardous substance that may be in your workplace. Hazard communication for other materials is covered by the Department of Industrial Relations (Cal/OSHA) standards found in Title 8, California Code of Regulations, section 5194. Complaints about pesticide problems should be filed with the county agricultural commissioner. Complaints about other safety problems should be filed with Cal/OSHA. The telephone numbers can be found in the government pages of the telephone book.



Hazard Identification:

The federal Environmental Protection Agency (USEPA) and DPR conducts hazard identification of pesticides as part of the pesticide product registration and label approval process. This process must be completed before the manufacturer can sell a pesticide. In addition to the "active" ingredients listed on the product label, pesticides commonly contain several "inert" ingredients which are not usually identified on the label. These inert ingredients can also have toxic properties and hazards of their own. If the identity of inert ingredients is needed to treat an acute case of pesticide poisoning, your physician can usually obtain the information from the manufacturer or possibly from DPR.

The pesticide label reflects the overall toxicity and hazards of the mixture. Signal words provide general information about acute eye or skin injury or poisoning potential. The signal word "DANGER" tells

you about high hazard products. "WARNING" means moderate hazard and "CAUTION" means the hazard is fairly low. The manufacturer is required to address hazards by placing specific information or precautions on the pesticide label.

- If the hazard is severe eye or skin injury, the label will have precautionary statements such as: "Corrosive, causes eye and skin damage".
- If the pesticide is very poisonous, the label will show the skull and crossbones symbol and the word "POISON".
- Language such as "fatal" or "may be fatal if swallowed, inhaled, or absorbed through the skin" also indicates high toxicity.
- Some labels warn about known or suspected effects such as cancer, organ damage, or birth defects.

However, since new information may take some time to be included on labels, you cannot rely totally on labels to identify hazards. Your employer must have, on file, a copy of the MSDS for the pesticide(s) used. Other sources of hazard information include industry trade bulletins, government hazard alerts, and Pesticide Safety Information Series (PSIS) leaflets.

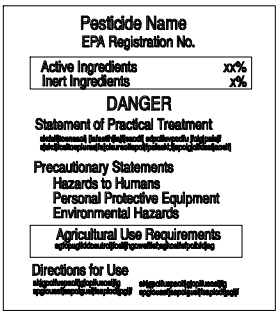
Training/Education:

Training is one important way that information about hazards and how to protect against them is made available to you. If you work with pesticides, you must be given adequate training about handling pesticides. You must be given training before you begin to work with pesticides and you must be given refresher training each year. You must fully understand the immediate and long term hazards of use and know the procedures you should follow to safely work with the specific pesticides you will handle, including the operation of pesticide handling equipment and use of personal protective equipment. PSIS A-1 describes everything that must be covered in pesticide training. Special training requirements exist, for those who use respiratory protection (see PSIS A-5). All training must be documented in writing and signed by you.

You must be informed about where and how you can obtain access to all of the work-related documents and records that must be kept (see Table 2). You must also be informed about where and how to obtain access to this PSIS, the MSDS and pesticide use records.

Labels And Other Forms Of Warnings:

In addition to training, there are a number of other ways that information is provided to you (see Table 2). The pesticide label provides use instructions that are legally required to be followed, and provides valuable hazard information. The labeling that covers the particular use must be present at the work site. Normally, this is the label on the container. However, if the use is only described on a product bulletin or other supplemental labeling, or if a service container (any container that is not the original manufacturer's container) is used, your employer must ensure that the proper labeling is present.



When possible, keep pesticides in their original container with the original label. If they are repackaged into service containers, do not use food, drink, or household product containers. Service containers must be labeled to identify the pesticide, its signal word, and the person or firm responsible.

Warning notices must be posted, facing all directions of probable approach, around areas where pesticides or containers with the signal words "DANGER" or "WARNING" are stored. The notices must be in a language you understand. More information on pesticide storage, transportation, and disposal is found in PSIS A-2.

The operator of the property must assure that you and others (including any other employer who might have employees), who are on or likely to enter treated areas, are warned about the identity of the pesticide and the precautions to be observed, including applicable reentry intervals. This may be done by posting signs around treated fields. If signs are not required by label or regulations you may be told orally. Follow directions about keeping out of treated fields or restricted areas.

In November 1986, California voters approved an initiative to address concerns about exposure to toxic chemicals. That initiative became the *Safe Drinking Water and Toxic Enforcement Act of 1986*, better known as Proposition 65. Proposition 65 requires the Governor to publish a list of chemicals that are known to the state to cause cancer, birth defects, or other reproductive harm. Chemicals that cause cancer are called **carcinogens**; those that cause birth defects or other reproductive harm are called **reproductive toxicants**. The Proposition 65 list contains a wide range of chemicals, including dyes, solvents, pesticides, drugs, and food additives. If a pesticide is on the list, your employer must warn you if you are exposed to levels of the pesticide that present a significant health risk. An employer may also choose to provide warning simply based on the presence of the chemical, even if the risk is not significant. In the case of worker exposure to pesticides, this warning is provided through the required hazard communication procedures. As an agricultural crop producer, your employer is required to keep application-specific information on the pesticides used. You have a right to look at this information and should have learned of the location of this information in your training. If you are unsure of the information location, ask your supervisor or employer. The following table lists the currently registered active ingredients on the Proposition 65 list.

Table 1
CURRENTLY REGISTERED PESTICIDES ON THE PROPOSITION 65 LIST

PESTICIDES KNOWN TO THE STATE TO CAUSE CANCER

Acifluorfen	DDVP (dichlorvos)	Lindane	Potassium dichromate
Alachlor	*p*-Dichlorobenzene	Mancozeb	Propargite
Arsenic acid	1,3-Dichloropropene	Maneb	Pronamide (propyzamide)
Arsenic pentoxide	Dipropyl isocinchomeronate (MGK repellent 326)	Metam sodium	Propylene oxide
Arsenic trioxide		Metiram	Silica aerogel
Cacodylic acid	Ethylene oxide	Mineral oil	Sodium bichromate dihydrate
Captan	Folpet	Oxadiazon	
Chlorothalonil	Formaldehyde (gas)	Pentachlorophenol	Sodium dichromate
Chromic acid	Iprodione	*o*-Phenylphenate, sodium (*o*-phenylphenol, sodium)	
Creosote			
Daminozide			

PESTICIDES KNOWN TO THE STATE TO CAUSE BIRTH DEFECTS OR REPRODUCTIVE HARM

Arsenic, pentoxide	Cyanazine	Nicotine
Arsenic, trioxide	Ethylene oxide	Oxadiazon
Benomyl	Metam sodium	Streptomycin sulfate
Bromoxynil heptanoate	Methyl bromide (as a structural fumigant)	Vinclozolin
Bromoxynil octanoate		Warfarin

Exposure Monitoring:

If you *regularly handle* (handle the pesticide for more than 6 days in any 30-day period) organophosphate or carbamate pesticides with the signal word "DANGER" or "WARNING" for use on agricultural crops, there are requirements for medical supervision and blood testing to detect overexposure. These requirements are covered in PSIS A-11.

This workplace: DOES _____
DOES NOT _____
use these pesticides on agricultural crops.

If they are used on crops, they are handled by any person: _____ Six days or less each 30 days
_____ More than six days in 30 days

If they are regularly handled by anyone, the physician providing medical supervision is:

Name _____

Address _____

_____

Telephone number _____.

Records:

There are a number of records that must be maintained by your employer and made available to you (see Table 2). These records can be grouped into three general kinds: training, exposure, and medical supervision.

After you sign them, your employer must keep records of training provided to you. Records of the content of the training program must also be kept. You employer must also keep records of most kinds of pesticide use. If organophosphates or carbamates are being used as described under exposure monitoring, the record must include the pesticide, the date, and identity of the user. If organophosphate and carbamate pesticides are used on a regular basis, your employer must maintain records verifying the required medical supervision and response to any overexposure.

The required records are kept at the following location at headquarters:

_____

_____

_____

EMERGENCY MEDICAL CARE

If you become ill or are injured on the job you must be taken for medical attention to:

_____

_____

_____

More information on first aid is available in PSIS A-4.

This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference can be found in the California Code of Regulations, Title 3. The words "must" and "should" used in the text are not the same. The word "must" means the action is required and comes from California regulations. The word "should" indicates additional handling practices that are recommended to further reduce exposure.

Table 2

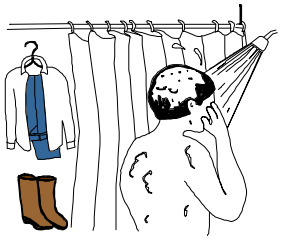
SUMMARY OF HAZARD COMMUNICATION RECORDS/DOCUMENTS

Record/Document	Retention	Location	Section
Training records	2 years	Headquarters	6724(e)
Written training program	2 years	Headquarters	6724(a)
Respirator program procedures	During use	Headquarters	6738(h)
Emergency response plan (fumigants)	During use	Work site	6780(d)
Pesticide Label	During use	Work site	6602
Pesticide Safety Information Series	2 years	Headquarters	6723(b)
Material Safety Data Sheet	2 years	Headquarters	6723(b)
Treatment notification method[1]	2 years	Headquarters	6619
Field posting[1]	During use	Work site	6776
Storage area posting[3]	During use	Work site	6674
Identity of medical supervisor notice[2]	During use	Headquarters	6728(a)
Employer/medical supervisor agreement[2]	3 years	Headquarters	6728(b)
Medical supervisor recommendations[2]	3 years	Headquarters	6728(c)
Cholinesterase blood test results[2]	3 years	Headquarters	6728(c)
Employee work practice review[2]	3 years	Headquarters	6728(d)
Emergency medical care notice	During use	Work site	6726
Medical evaluation (respirator use)	During use	Headquarters	6738(h)
Pesticide use records	2 years	Headquarters	6624
Employee exposure records[2]	3 years	Headquarters	6728

[1] Agricultural production
[2] Signal word "DANGER" or "WARNING", organophosphate and carbamate, agricultural production
[3] Signal word "DANGER" or "WARNING"

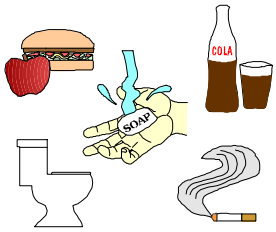
SAFETY TIPS

- Protect your skin.
- Wear clothes with long sleeves and long pants, shoes or boots, socks, a hat and/or scarf and gloves.
- Make sure they are clean and without holes.



- Take a bath or shower as soon as you get home from work
- Wash with soap & water a hampoo on your hair
- Put on clean clothes

- Pesticides get on work clothes and then on your skin
- Wash work clothes before wearing them again
- Wash work clothes separate from other clothes



- Always wash your hands before eating, drinking, smoking, chewing gum or going to the bathroom
- Do not cook food with wood found in the field

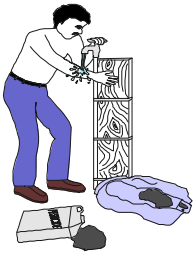
- Never put pesticides in food containers
- Do not take farm pesticides or their containers home
- Keep children away from pesticides

ILLNESS/INJURY

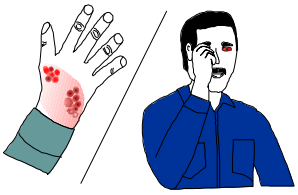
- Pesticides get on your skin and clothes when you touch sprayed plants, soil, irrigation water or are exposed to spray drift.
- They can move from your clothes and onto your skin.
- Some pesticides easily go through your skin and can make you sick.

- Tell the boss if you are sick or hurt at work.
- If the illness/injury is work-related, your employer will pay for all medical care of that illness.
- If the condition is work-related you may be paid for your time off work while sick or hurt.

FIRST AID



- Wash immediately with the closest clean water if pesticides are spilled or sprayed on your clothes or skin.
- Change into clean clothes
- Tell your boss after washing



- Wash if your eyes or skin begin to itch or burn
- Use lots of water
- Tell your boss, you should go to a doctor

- If you feel sick at work (headache, stomach ache, vomiting, dizzy) tell your boss.
- He or she can make sure you are taken to a doctor.

- Have someone else drive you to the doctor if you are sick or injured

Click here to PRINT

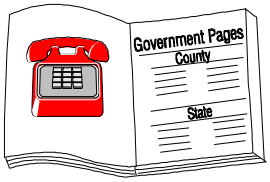
Pesticide Safety Information Series A

Worker Health and Safety Branch

A-9 HAZARD COMMUNICATION INFORMATION FOR EMPLOYEES WORKING IN AGRICULTURAL FIELDS

General:
This leaflet tells you of your right to know about potential work hazards. This leaflet also helps your employer comply with these regulations. Your employer is responsible for knowing and telling you, in a language you understand, about specific pesticides that have been used, and how you should protect yourself from them.

Pesticides are only one kind of hazardous substance that may be in the workplace. Hazard communication for other materials is covered by the state Department of Industrial Relations (Cal/OSHA) standards found in Title 8, California Code of Regulations, section 5194. Complaints about pesticide problems should be filed with the county agricultural commissioner. Complaints about other safety problems should be filed with Cal/OSHA. The telephone numbers can be found in the government pages of the telephone book.



Your Rights As An Employee:
The law requires that you be told about potential hazards in the workplace. In addition, you must be trained to deal with those hazards. There are also warning requirements to help you know when hazards are present. As an employee you have certain rights:

- You have the right to look at Material Safety Data Sheets (MSDS) and pesticide use records
- You have the right to file confidential complaints about unsafe work conditions without being punished or fired by your employer
- Whoever pays you must make plans for medical care and see that you are taken to the doctor if you get sick on the job
- If you get sick or injured at work, you have the right to file a claim for worker's compensation.

Your employer will explain your rights to you. If you need more help in understanding your rights, go to your local county agricultural commissioner's office, the local legal aid, worker's rights office or your union.

Hazard Identification:
Before a pesticide can be sold and used in California, it is studied and reviewed to find out about harmful effects. Pesticide manufacturers tell you, on the product label, how to reduce these hazards. That is why the label contains certain protective equipment requirements, and why there may be a time after a pesticide application when you cannot go back into a field.

Restricted Entry Intervals:
You must not go into a field for any reason for at least 4 hours following any pesticide application. After a pesticide is sprayed on a field it begins to go away. Some pesticides take longer than others to go away. A restricted entry interval (REI) is the time it should take for the pesticide to go away and it is safe to work in the field again.

Generally, if you will be handling the plants or other treated things, you should not work in a field during a REI. This includes work such as hand harvesting, detasseling, thinning, hand weeding, topping, planting, sucker removal, pruning, disbudding, roguing, packing produce and other work that requires you to handle the plants. Some pesticide labels allow for limited field work during the REI.

Work such as irrigating and tractor driving can be done safely during a REI if you are warned and are

protected. If you go into a field before the REI is over, you must be protected by wearing the personal protective equipment listed on the label. If you handle uncontaminated irrigation equipment and contact with foliage and other treated surfaces is limited, you can work for 8 hours per day. If you handle irrigation equipment that was in the field during the application, contact with treated surfaces may not be limited and your work time might be reduced to 1 hour per day.

If you irrigate, drive tractor or do other work during the REI, or do other work in a recently treated field, you must be told the following:

- about the pesticide and the REI
- how to work safely
- to take a shower or bath after work.

Your employer must provide you with any personal protective equipment required.

Warnings:

The farmer must tell you and others who are likely to go into treated fields (including greenhouses):

- about the pesticide
- how long to stay out of the field
- what you must do to protect yourself.

If a labor contractor pays you, the labor contractor must tell you about these things. Follow the instructions about staying out of treated areas.

In November 1986, California voters approved an initiative to address concerns about exposure to toxic chemicals. That initiative became the *Safe Drinking Water and Toxic Enforcement Act of 1986*, better known as Proposition 65. Proposition 65 requires the Governor to publish a list of chemicals that are known to the state to cause cancer, birth defects, or other reproductive harm. Chemicals that cause cancer are called **carcinogens**; those that cause birth defects or other reproductive harm are called **reproductive toxicants**. The Proposition 65 list contains a wide range of chemicals, including dyes, solvents, pesticides, drugs, and food additives. If a pesticide is on the list, your employer must warn you if you are exposed to levels of the pesticide that present a significant health risk. An employer may also choose to provide warning simply based on the presence of the chemical, even if the risk is not significant. In the case of worker exposure to pesticides, this warning is provided through the required hazard communication procedures. As an agricultural crop producer, your employer is required to keep application-specific information on the pesticides used. You have a right to look at this information and should have learned of the location of this information in your training. If you are unsure of the information location, ask your supervisor or employer. The following table lists the currently registered active ingredients on the Proposition 65 list.

CURRENTLY REGISTERED PESTICIDES ON THE PROPOSITION 65 LIST

PESTICIDES KNOWN TO THE STATE TO CAUSE CANCER

Acifluorfen	DDVP (dichlorvos)	Lindane	Potassium dichromate
Alachlor	*p*-Dichlorobenzene	Mancozeb	Propargite
Arsenic acid	1,3-Dichloropropene	Maneb	Pronamide (propyzamide)
Arsenic pentoxide	Dipropyl isocinchomeronate (MGK repellent 326)	Metam sodium	Propylene oxide
Arsenic trioxide	Ethylene oxide	Metiram	Silica aerogel
Cacodylic acid	Folpet	Mineral oil	Sodium bichromate dihydrate
Captan	Formaldehyde (gas)	Oxadiazon	Sodium dichromate
Chlorothalonil	Iprodione	Pentachlorophenol	
Chromic acid		*o*-Phenylphenate, sodium (*o*-phenylphenol, sodium)	
Creosote			
Daminozide			

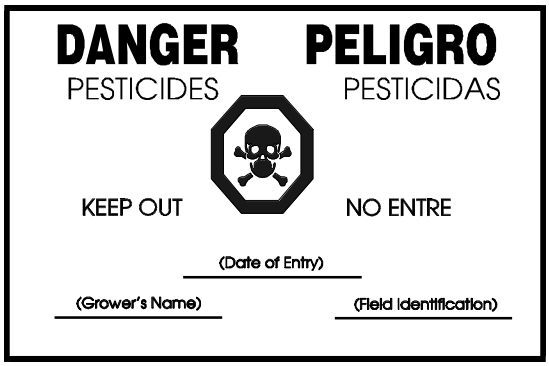
PESTICIDES KNOWN TO THE STATE TO CAUSE BIRTH DEFECTS OR REPRODUCTIVE HARM

Arsenic, pentoxide	Bromoxynil octanoate	Methyl bromide (as a structural fumigant)	Streptomycin sulfate
Arsenic, trioxide	Cyanazine	Nicotine	Vinclozolin
Benomyl	Ethylene oxide	Oxadiazon	Warfarin
Bromoxynil heptanoate	Metam sodium		

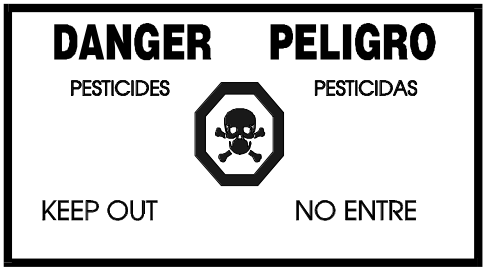
Posting:

The farmer must put up signs like the one that follows when:

- required by the pesticide label
- a pesticide is applied in a greenhouse
- there is a REI over a week long.



For some pesticides, the sign may look more like this:



Regulations do not require posting for all REIs. The signs must be put up at places where you usually go into the field and every 600 feet along roads where the treated area is unfenced. The signs must be put up before the pesticide is applied and taken down after the REI ends.

Training:

Every employee who works in treated fields must receive training at least every five years. The training must include:

- importance of routine washing after work
- explanation of REIs and posting
- where pesticide residues might be found
- routes of exposure
- hazards of pesticides
- symptoms of overexposure
- first aid
- warnings about taking pesticides home
- hazard communication program
- your rights as an employee.

People get sick from many different causes at home or at work. Pesticides can make you sick. The symptoms can be the same as having the flu or other common illnesses. If you get a headache, dizziness, upset stomach, blurred vision, other flu-like symptoms, rashes, or eye irritation while working in the field, you should ask your boss to take you to the doctor. These symptoms can be caused by pesticide exposure. Your employer must make plans for medical care and see that you are taken to the doctor if you get sick or injured on the job.

Workers can get skin rashes from pesticides that have been used and from plants or insects in the field. It is important to take a bath or shower after working in fields to remove pesticides or plant juices that might cause skin rash or illness. If you are told to mix or apply pesticides, you must be given more training on how to safely do that job.

Records:

The farmer must keep a copy of the pesticide use records and must allow you to look at it. The farmer must also have information about pesticides that have been used. The Material Safety Data Sheet for the pesticides used must be kept for you to see, even if you are working for a labor contractor. These records are located at:

_____

_____

_____

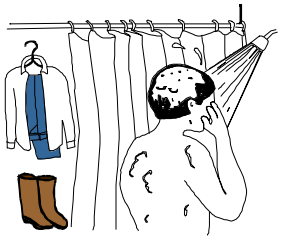
Additional information about these requirements is available from your local county agricultural commissioner.

This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference can be found in the California Code of Regulations, Title 3. The words "must" and "should" used in the text are not the same. "Must" means the action is always required by law or regulations. "Should" means the action is recommended to reduce exposure even though it may not always be required.

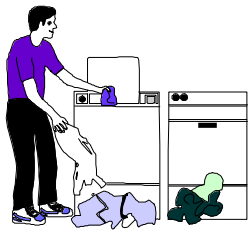
HS-1587 Revised September 20, 1998
R. Rutz and S. Edmiston

SAFETY TIPS

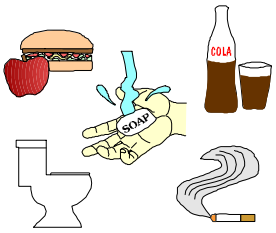
- Protect your skin.
- Wear clothes with long sleeves and long pants, shoes or boots, socks, a hat and/or scarf and gloves.
- Make sure they are clean and without holes.



- Take a bath or shower as soon as you get home from work
- Wash with soap & water a hampoo on your hair
- Put on clean clothes



- Pesticides get on work clothes and then on your skin
- Wash work clothes before wearing them again
- Wash work clothes separate from other clothes



- Always wash your hands before eating, drinking, smoking, chewing gum or going to the bathroom
- Do not cook food with wood found in the field

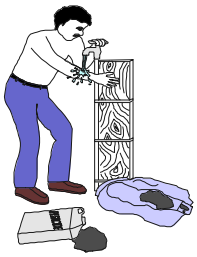
- Never put pesticides in food containers
- Do not take farm pesticides or their containers home
- Keep children away from pesticides

ILLNESS/INJURY

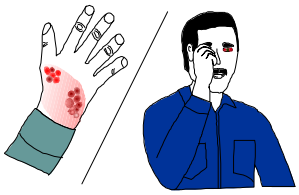
- Pesticides get on your skin and clothes when you touch sprayed plants, soil, irrigation water or are exposed to spray drift.
- They can move from your clothes and onto your skin.
- Some pesticides easily go through your skin and can make you sick.

- Tell the boss if you are sick or hurt at work.
- If the illness/injury is work-related, your employer will pay for all medical care of that illness.
- If the condition is work-related you may be paid for your time off work while sick or hurt.

FIRST AID



- Wash immediately with the closest clean water if pesticides are spilled or sprayed on your clothes or skin.
- Change into clean clothes
- Tell your boss after washing



- Wash if your eyes or skin begin to itch or burn
- Use lots of water
- Tell your boss, you should go to a doctor

- If you feel sick at work (headache, stomach ache, vomiting, dizzy) tell your boss.
- He or she can make sure you are taken to a doctor.

- Have someone else drive you to the doctor if you are sick or injured

Click here to PRINT

Pesticide Safety Information Series A

Worker Health and Safety Branch

A-10

MINIMAL EXPOSURE PESTICIDES
In Agricultural Settings

General Information:

The Minimal Exposure Pesticide (MEP) list was established to inform users about pesticides with hazards not identified by the well known label signal word system of "DANGER", "WARNING" or "CAUTION". Every pesticide label contains one of these signal words. The use of signal words began many years ago. The U.S. Environmental Protection Agency continued use of the signal words when given authority to regulate pesticides by the U.S. Congress in 1972. Signal words give the user a good idea of the pesticide's ability to cause immediate (acute) illness or injury.

We are learning that some pesticides may cause other kinds of health effects. If exposed to these pesticides, you may not notice any effects for a long time after the exposure. Some of these health effects (like cancer) can be caused by exposure to small amounts of pesticide over a long period of time. Other effects (such as birth defects) may be caused by exposure to very small amounts of pesticide at a critical time. These types of adverse effects are not identified by the signal words on the label. Because of these problems, the Minimal Exposure Pesticide regulations were developed to inform workers about the potential effects of some pesticides.

Some MEP labels will have the signal word "CAUTION" on them. This normally means that a worker handling that particular pesticide might not need to be as careful when handling it. This is not true for MEPs. One may not become sick or injured right away from excessive exposure to a pesticide on the MEP list. But, that exposure could be doing damage in your body, causing delayed or long-term effects.

Minimal Exposure Pesticides:

1. Bromoxynil (Buctril®) - Bromoxynil is a herbicide used to kill annual broadleaf weeds in grain crops, corn, sorghum, flax, rangeland, garlic and onions. In experimental animals, it has been shown to cause birth defects and harmful effects in the pregnant animal. These effects may occur at very low levels of exposure.

2. Oxydemeton-methyl (Metasystox-R) - Oxydemeton-methyl is an insecticide and miticide used on fruit, nut and vegetable crops. It is in a class of chemicals that affects an enzyme necessary for proper functioning of the nervous system. Acute poisoning leads to symptoms like headache, nausea, vomiting, weakness and blurred vision. Oxydemeton-methyl caused adverse effects on the male reproductive system at very low levels.

3. Propargite (Omite®, Comite®) - Propargite kills mites on cotton, corn, citrus, grapes, strawberries, stone fruit and other crops. Acute symptoms of overexposure include severe skin and eye irritation, coughing and sore throat. Propargite causes toxicity (less weight gain) in pregnant experimental animals. It also lead to cancer in experiments in laboratory animals. This effect may occur in humans at very low levels of exposure.

Folpet is also listed as an MEP. However, currently the only products registered are paints, coatings and caulkings. These products are exempt from the MEP requirements.

MEP Use Requirements:

The MEP regulations apply regardless of the signal word on the label. In addition to following the safety precautions on the label and in California regulations, your employer must provide the following if you handle MEPs:

- an area with clean towels, soap and water where workers can change clothes and wash at the end of the work day
- a clean, pesticide-free place for employees to store personal clothing not in use while handling pesticides
- clean towels, soap and clean water at the mix/load site for routine or emergency washing
- clean coveralls (one- or two-piece garment that covers the body except the head, hands and feet); your employer must ensure that you start each work day with clean coveralls
- a closed system for mixing and loading, except for employees who handle a total of one gallon or less per day in original containers of one gallon or less
- clean full-body, chemical resistant clothing that covers the head, torso, arms, hands, legs and feet
- appropriate, clean respiratory protection.

Exemptions And Additional Precautions:

Oxydemeton-methyl

- Application to ornamental landscape trees and shrubs must be made by trunk injection or soil injection methods only
- Applications within a greenhouse are not allowed.

Propargite

- Applications within a greenhouse are not allowed.

There are some general exemptions to the MEP requirements for full body protective clothing when using engineering controls. The following table explains those substitutions allowed.

This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference can be found in the California Code of Regulations, Title 3. The words "must" and "should" used in the text are not the same. The word "must" means the action is required and comes from California regulations. The word "should" means additional handling practices that are recommended to further reduce exposure.

Allowed Substitutions When Using Engineering Controls

When using the following:	Handlers may substitute:*	For the following:
Closed system for pesticides with "Danger" or "Warning"	Coveralls, chemical resistant gloves and chemical resistant apron	PPE required on the pesticide labeling
Closed system for pesticides with "Caution"	Work clothing	PPE required on the pesticide labeling
Closed system under positive pressure	Protective eyewear**	
Mixing pesticides in water soluble packets	Use in water soluble packets***	Use of a closed system
Enclosed cab	Work clothing and respiratory protection required	PPE required on the pesticide labeling
Enclosed cab acceptable for respiratory protection	Work clothing	PPE required on the pesticide labeling
Any pesticide	Chemical resistant suit	Coveralls and a chemical resistant apron

* For any substitution, all PPE required by the label must be available in case of an emergency

** Protective eyewear is required in addition to coveralls, chemical resistant gloves and apron for pesticides with "Danger" or "Warning" or in addition to work clothing for pesticides with "Caution" on the label

*** Using pesticides in water soluble packets is equivalent to mixing with a closed system. However, transfer from mix tank to application tank must be made with closed transfer equipment.

HS-1697 Revised September 20, 1998
S. Edmiston, R. Rutz

Click here to PRINT

Pesticide Safety Information Series A

Worker Health and Safety Branch

A-11 MEDICAL SUPERVISION

General Information:

Medical supervision involves contracting with a licensed physician for occupational health evaluation and illness prevention. Your employer must provide medical supervision if you regularly handle (mix, load, or apply for more than 6 days in any 30-day period) an organophosphate or N-methyl carbamate (carbamate) pesticide with the signal word "DANGER" or "WARNING" on the label. Organophosphates include Guthion®, diazinon, and Lorsban®. Carbamates include Lannate®, Temik® and Sevin®.

Cholinesterase is an enzyme in the body that affects nerve functions. Cholinesterase is the target in your body for organophosphates and carbamates. Cholinesterase tests measure your exposure to organophosphates and carbamates. The workplace safety program must include cholinesterase monitoring as an integral part. Medical supervision must include cholinesterase monitoring. When cholinesterase levels in your body drop, your employer must:

- evaluate the workplace
- correct problems with faulty equipment
- correct bad work habits or
- remove you from more exposure before you become clinically ill.

At the present time, a blood test is the only practical way to obtain this information.

Baseline:

Monitoring cholinesterase requires establishment of a preexposure "baseline" level. A baseline test is required for each employee who mixes, loads or applies these pesticides on a regular basis. Your baseline blood sample should be collected when you have not been exposed to organophosphates or carbamates for at least 30 days.

Cholinesterase Testing:

For occupational exposure to pesticides, cholinesterase testing should include both red blood cell (RBC) and plasma (or serum) cholinesterase analysis. The two tests have different meanings; a physician needs the combined report to evaluate exposure. Carbamates react with the enzyme differently than do organophosphates. Following exposure to carbamates, the blood draw and laboratory analysis needs to be completed quickly or the physician will not be able to determine the extent of exposure or seriousness of safety problems on the job.

New employees must:

- be tested at the end of each of the first three 30-day periods of regularly handling
- then the periodic monitoring is reduced to every 60 days or as recommended by the medical supervisor.

Thirty-day periods begin on the first day of exposure. It is possible that each period may be separated by a time of non-use. After the first three tests, the medical supervisor may adjust the testing schedule to reflect work practices, pesticide use or prior test results.

Laboratory methods for cholinesterase enzyme differ. Results obtained by different methods cannot readily be compared. Therefore, the same laboratory, using the same method should perform all cholinesterase monitoring for a given person.

Response:

A change in cholinesterase may result from something other than pesticide exposure, however, you should never assume this to be the case. Your employer must investigate work practices, and take steps to correct unsafe situations, whenever your cholinesterase level drops below 80% of your baseline value. If your RBC level drops to 70% or less or your plasma level drops to 60% or less of your baseline, your employer must stop all exposure to organophosphates or carbamates. Exposure to these pesticides must not resume until both levels return to at least 80% of your baseline level.

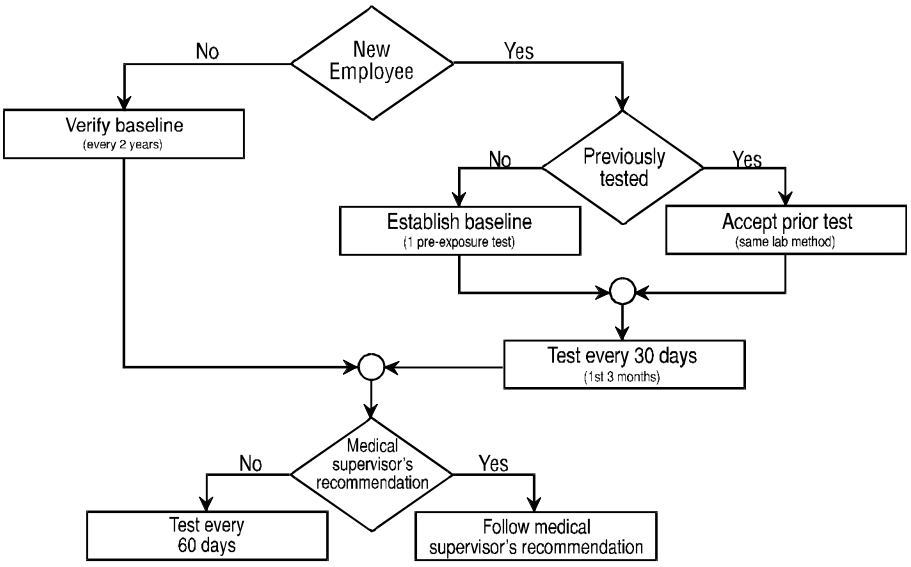
To expedite laboratory test result reporting, the physician may have the laboratory mail the results to

your employer at the same time they are sent to the physician. At the time your baseline is determined, the physician may set minimum acceptable levels for both plasma and RBC results. In this manner, your employer will have guidance for early detection of a possible problem. However, only licensed physicians should interpret cholinesterase testing results. Others involved in this safety program should only follow the guidelines set by the medical supervisor. Neither you nor your employer should assume the role of interpreting test results and making diagnoses.

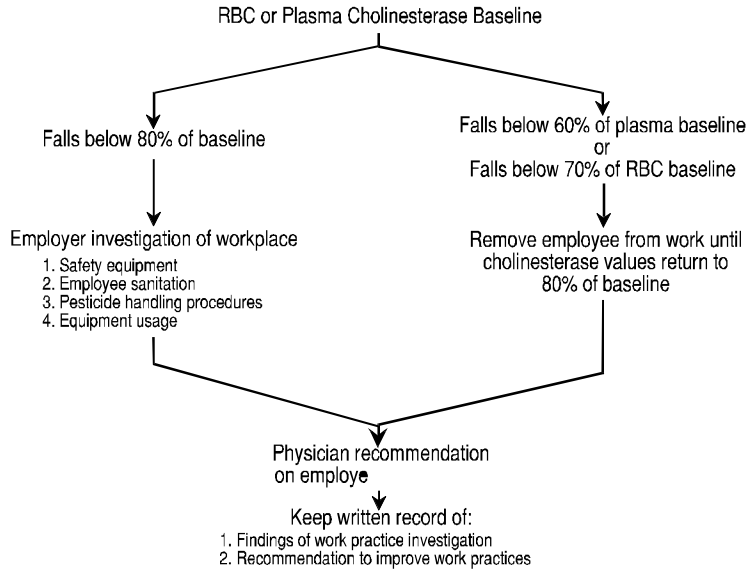
Additional information on medical supervision is contained in Guidelines for Physicians, published by the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment.

This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference can be found in the California Code of Regulations, Title 3. The words "must" and "should" used in the text are not the same. "Must" means the action is always required by law or regulations. "Should" means the action is recommended to reduce exposure even though it may not always be required.

Medical Supervision Program



Response to Low Blood Test Results



Seguridad de Pesticida *Información*

Sección de Salud y Seguridad del Trabajador

Serie A

A-1(s) REQUERIMIENTOS DE SEGURIDAD PARA LOS QUE MANEJAN PESTICIDAS EN ESCENARIOS AGRÍCOLAS

Este folleto explica los requerimientos de la seguridad con los pesticidas y es una guía para los que manejan pesticidas en escenarios agrícolas. El término "manejo" se refiere a cualquiera actividad relacionada con la aplicación de pesticidas. El manejo incluye la mezcla, carga, aplicación, reparación o limpieza del equipo contaminado, y el manejo de envases que no han sido enjuagados.

El Peligro de los Pesticidas:

Antes de vender un pesticida, se llevan a cabo numerosos ensayos para determinar los posibles peligros en la salud y el ambiente. Los pesticidas (y otros productos químicos) pueden ser absorbidos a través de su piel y penetrar en su cuerpo y causar enfermedad. La exposición de las manos contribuye en forma significativa en el peligro del manejo de los pesticidas. La protección de la piel es a menudo el problema más difícil asociado con el uso de pesticidas.

Etiqueta y Reglamentos:

Las leyes federales requieren que las etiquetas de los pesticidas contenga precauciones específicas para proteger su salud. Además, cada etiqueta tiene que mostrar la palabra señal que dé una indicación de los peligros agudos (inmediatos) de la salud. Las palabras señales son las siguientes:

- "Peligro" ("Danger") indica que el pesticida es extremadamente tóxico
- "Advertencia" ("Warning") indica una toxicidad moderada
- "Cuidado" ("Caution") indica una toxicidad baja.

Las leyes Federales y Estatales requieren que los pesticidas se usen de acuerdo con los requerimientos en la etiqueta. Adicionalmente, el Estado establece sus propios reglamentos. En algunos casos, los reglamentos del Estado son más estrictos que las leyes Federales; esto lo proteje a usted en usos más específicos para California. Usted debe seguir ambas etiquetas y los reglamentos del Estado. En caso de conflicto, siga la etiqueta más estricta.

Interpretación de las Precauciones de Seguridad en la Etiqueta:

Interprete las precauciones de seguridad en la etiqueta cuidadosamente. Tome en cuenta la palabra señal y la situación de la aplicación. Si la etiqueta dice que evite respirar la neblina del rocío, usted debe colocarse una máscara respiratoria para protejerse de los peligros de la inhalación. En lugares al aire libre, pueden producirse condiciones peligrosas cuando no hay viento y se producen inversiones de temperatura. La falta de movimiento de aire y las temperaturas altas crean una situación de peligro potencial. Por otra parte, cuando hay mucho viento se crea un fuerte potencial de una deriva hacia donde hay gente y hacia otros cultivos que no son el punto de rocío. Estudie la situación antes de manejar el pesticida.

El uso de controles de ingeniería, como los sistemas cerrados y cabinas cerradas, siempre se prefieren por sobre el uso de equipo de protección personal (PPE), como por ejemplo una máscara respiratoria, impermeable, etc. En muchas situaciones, cuando se utilizan controles de ingeniería, los que manejan pesticidas pueden utilizar menos PPE. Los substitutos que se permiten cuando se utilizan controles de ingeniería se encuentran en la Serie Informativa de Seguridad de Pesticidas (PSIS) A-3, Tabla 1.

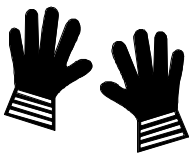
El vaceo a mano y el movimiento (transporte) de concentrados de pesticidas representa uno de los mayores peligros para la gente que trabaja con pesticidas. Después de mezclar un pesticida y

cargarlo en el equipo de aplicación para aplicarlo como un rocío de líquido diluído, el peligro se disminuye un poco. Sin embargo, cuando se manipula la solución diluída, usted siempre debe evitar mojarse con el rocío sin considerar la palabra señal de la etiqueta.

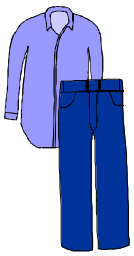
Precauciones Específicas de Seguridad a Seguir:

- Se requiere protección de los ojos en la mayoría de las actividades que requieren mezclar y cargar, aplicar, mantener el equipo y señalizar con bandera. Hay exenciones cuando se injecta o incorpora pesticidas en el suelo, cuando las boquillas estan debajo del aplicador y apuntando hacia abajo, cuando se trabaja en una cabina cerrada, en aplicaciones de cebo para vertebrados o fumigantes sólidos, y cuando se coloca cebos no-insecticidas.

- La protección de los ojos incluye gafas, anteojos de seguridad (con protección al ceño y a la sien), una protección para la cara, o una máscara de cara entera (parte de la protección respiratoria). Los pilotos pueden usar una visera para la protección de los ojos. Los anteojos comunes y anteojos de sol NO protegen adecuadamente a los ojos.
- Los empleados encargados de mezclar y cargar pesticidas, mantener el equipo para aplicar pesticidas y aplicar pesticidas a mano (incluyendo equipo que se sostiene con la mano), se les tiene que proporcionar y tienen que usar guantes.



- El empleador tiene que proveer guantes nuevos y limpios cada día.
- Si la etiqueta no especifica el tipo de guantes que se necesita, usted tiene que usar guantes de goma (caucho), neopren o de otro material resistente a productos químicos.
- Si la etiqueta especifica que el manejador no tiene que usar guantes, quiere decir que usted no tiene que usar guantes.
- Use protección respiratoria cuando utilice pesticidas que son tóxicos al inhalar, tales como los fumigantes, talcos, polvos, y algunos líquidos.
- El tipo de protección respiratoria que se requiere aparecerá en la etiqueta del pesticida.
- Su empleador tiene que tener un procedimiento por escrito para seleccionar, ajustar, limpiar, desinfectar y mantener el equipo respiratorio. Para obtener información adicional sobre protección respiratoria vea el PSIS A-5.
- Algunas condiciones médicas, tales como enfermedades del corazón y el pulmón, podrían prevenir que usted use protección respiratoria. Si usted sufre de una de estas condiciones, un médico debe examinarlo antes de usar máscara respiratoria.
- También se requiere protección respiratoria para la mayoría de las actividades de manejo que incluyen pesticidas de la lista de Pesticidas de Exposición Mínima (existen algunas exenciones). El PSIS A-10 contiene información adicional sobre Pesticidas de Exposición Mínima.
- Todos los empleados que mezclan/cargan pesticidas líquidos o mezclas de líquidos provenientes de pesticidas secos y con la palabra señal "PELIGRO" ("DANGER") se requiere que usen un sistema cerrado. Para información adicional sobre sistemas cerrados vea PSIS A-3.
- Si usted maneja pesticidas cuyas etiquetas contienen la palabra señal "PELIGRO" (DANGER) o "ADVERTENCIA" (WARNING), su empleador tiene que proveerlo con overoles limpios (de una o dos piezas, con manga larga y pantalones largos) cada día que se usen estos pesticidas. (Esto no se solicita de aquéllos que manejan fumigantes, salvo que la etiqueta requiera especificamente el uso de overoles).



- Si la etiqueta del pesticida o los reglamentos de California requieren el uso de protección resistente a productos químicos, el empleador tiene que proveer un traje limpio resistente a productos químicos, delantal (mandil) (si se especifica), calzado y gorra, que cubran el cuerpo, los pies y la cabeza.
- Debido a las altas temperaturas que existen en California, el uso del traje resistente a producto químico puede causar una fatiga que puede

presentar un peligro mayor que el uso de pesticida. En ausencia de los controles de ingeniería, tales como cabinas con aire acondicionado, las aplicaciones deben hacerse de noche o durante las horas mas frescas del día.

- Si se requiere del uso de un traje resistente a producto químico, usted no tiene que trabajar a temperaturas de sobre 80°F durante las horas con luz del día o sobre 85°F durante horas de la noche, salvo que usted use un traje especial que no le dé calor (como los que usan una gel fría que se coloca debajo del traje). Para los que manejan pesticidas, existen algunas exenciones en los requerimientos de trajes resistentes a productos químicos (vea PSIS A-3).

- Su empleador tiene que proveer de un lugar para cambiarse ropa y lavarse al final del día.
- Su empleador tiene que proveer de agua adecuada, jabón y toallas para lavarse las manos y la cara. También, debe de proveer de agua en caso de emergencia para lavarse los ojos con un flujo de agua y para lavarse todo el cuerpo en caso de accidente.

Entrenamiento:

Los reglamentos de California requieren que los empleados sean entrenados adecuadamente antes de manejar pesticidas. Su empleador tiene que tener un programa de entrenamiento para empleados que manejan pesticidas. Su entrenamiento tiene que incluír para cada pesticida o grupo químico de pesticidas lo siguiente:

- el significado de las declaraciones de precaución de la etiqueta
- información acerca de los peligros inmediatos y peligros a largo plazo de los pesticidas a usar
- los diferentes lugares del cuerpo por donde puede entrar el pesticida
- señales y síntomas de envenenamiento
- primeros auxilios de emergencia
- como obtener cuidado médico de emergencia
- procedimientos de decontaminación de emergencia y de rutina
- la necesidad de PPE, sus limitaciones su uso y limpieza
- prevención, síntomas y primeros auxilios para enfermedades debidas al calor
- requerimientos y procedimientos de seguridad
- preocupación por el ambiente
- instrucciones para no llevarse los pesticidas o sus envases a la casa
- reglamentos pertinentes, Hoja de Información de Seguridad del Producto Químico y los folletos PSIS
- el propósito de la supervisión médica, si es aplicable
- lugar donde se encuentra el documento escrito de la Información de la Comunicación de Peligro (PSIS A-8)
- los derechos del empleado.

Este folleto ayuda a los lectores a entender los reglamentos de pesticidas. No es un documento legal. La referencia legal puede encontrarse en el Código de Reglamentos de California, Artículo 3. Las palabras "tiene que" y "debe" usadas en este texto no significan lo mismo. Las palabras "tiene que" indican que la acción es obligatoria y deriva de las reglamentaciones de California. La palabra "debe" indica que se recomienda el uso de prácticas de seguridad adicionales para promover la redución a la exposición a pesticidas.

Seguridad de Pesticida Información
Sección de Salud y Seguridad del Trabajador
Serie A

A-2(s)

ALMACENAJE, TRANSPORTE Y DISPOSICION En Escenarios Agrícolas

Información General:

Este folleto describe métodos generales y requerimientos para el almacenaje, transporte y disposición apropiado de los pesticidas y sus envases. Las siguientes precauciones reducirán el número de envenenamientos accidentales de pesticidas, especialmente los que involucran a niños.

- Mantenga los pesticidas en su envases originales.
- Nunca coloque pesticidas en envases que se usan para los alimentos, bebidas o productos caseros.
- NO LLEVE a casa, ni utilice alrededor de la casa ningún pesticida utillizado en el trabajo.

Almacenaje:

Almacene debidamente y mantenga los pesticidas y sus envases vacíos bajo el control de una persona en todo momento. Control personal directo quiere decir que una persona responsable puede evitar que las personas no autorizadas entren en contacto con los pesticidas. Si los pesticida(s) están bajo su control personal directo y adyacentes a caminos o áreas pobladas, usted tiene que tener estos pesticidas a la vista. Un almacenaje aceptable incluye:

- un cercado con llave
- un compartimento con llave
- un camión con llave o remolque con barandas laterales (la parte alta de las barandas debe estar por lo menos a seis pies del suelo).

Todos los lugares de almacenaje deben mantenerse limpios, secos, ventilados y bien iluminados. Lea y siga los requerimientos de almacenamiento detallados en la etiqueta. Si los pesticidas se almacenan junto con los fertilizantes, mantenga ambos separados. Los pesticidas y los fertilizantes pueden reaccionar químicamente y provocar un incendio. Si los pesticidas contaminan los fertilizantes, también existe la posibilidad que se produzca daño en el cultivo o se encuentren resíduos en productos que se envían al mercado.

No almacene pesticidas cerca de los alimentos, forraje o equipo protector personal, porque estos pueden contaminarse con pesticidas.

Su empleador puede necesitar un permiso para un lugar de deshecho, si el o ella almacena deshechos de pesticida, tales como productos viejos o envases sin enjuagar. Para mayor información sobre los requerimientos específicos, comuníquese con la Agencia de Protección Ambiental de California (Cal/EPA), Departamento de Control de Substancias Tóxicas. El número de teléfono se puede encontrar en las Páginas de Gobierno de su guía telefónica.

Requerimientos de Anuncio de Almacenaje.

Pegue anuncios de advertencia, en las áreas de almacenamiento de pesticidas con la palabra señal "PELIGRO" o "ADVERTENCIA" en la etiqueta. Fije las señales en todas las direcciones de posible alcance. Usted tiene que poder leerlos desde una distancia de 25 pies. Estas señales tienen que decir:

PELIGRO
ALMACENAJE DE VENENOS" (DANGER POISON STORAGE AREA)
TODA PERSONA NO AUTORIZADA MANTENGASE ALEJADA
MANTENGA LA PUERTA CERRADA CUANDO NO ESTE EN USO.

Transporte:

Para transportar los pesticidas sin peligro usted tiene que seguir estos simples procedimientos:

- No transporte los pesticidas en el mismo lugar en que se transporta gente, comida o forraje.
- Transporte los pesticidas en posición vertical.
- Cierre herméticamente los envases para evitar que se derramen.

- Todos los envases tienen que tener la etiqueta.
- Esta etiqueta tiene que ser la etiqueta original del producto o una etiqueta del envase en uso.
- Las etiquetas del envase en uso requiere el nombre y dirección de la persona responsable del envase, el nombre común del pesticida y la palabra señal de la etiqueta original.

Pueden existir otros reglamentos a seguir cuando se transportan materiales peligrosos. Como regla general, consulte la Unidad de Seguridad de Transporte Motorizado del Servicio de Policía de Caminos de California (California Highway Patrol Motor Carrier Safety Unit), cuando se va a transportar una cantidad de pesticidas mayor de lo que se puede usar en unos pocos días de trabajo. El número de teléfono se puede encontrar en las Páginas de Gobierno de su guía telefónica.

Enjuague:

Todos los envases que contienen menos de 28 galones, tienen que enjuagarse cuando se termina de usar todo el contenido. A no ser que, tenga que devolverse al fabricante que registró el producto y con el permiso previo de este fabricante, o que el pesticida se use en forma de concentrado (sin diluírse) y no necesita enjuagarse. Hay dos procedimientos de enjuague. Siga uno de ellos para asegurarse que usted ha enjuagado adecuadamente los envases.

Procedimiento #1:

1. Para envases de menos de 5 galones, use suficiente agua para llenar l/4 del envase. Para envases más grandes, use suficiente agua para llenar hasta un quinto del volumen del envase.
2. Ponga la cantidad apropiada de agua en el envase. Ciérrelo firmemente y agítelo.
3. Vacíe la solución en el estanque de la mezcla. Permita que el envase se vacíe completamente.
4. Repita los pasos 1 - 3 por lo menos dos veces más.

Procedimiento #2:

1. Invierta el envase vacío y póngalo bajo una boquilla. Esta boquilla tiene que estar ubicada en la abertura del tanque de mezcla, de manera que el líquido se vacie en el tanque. La boquilla tiene que ser capaz de enjuagar todas las superficies internas del envase.
2. Abra la boquilla y enjuague hasta que el agua que sale del envase sea clara. Use un mínimo de agua correspondiente a la mitad del volumen del envase.

Usted podría usar otros procedimientos para hacer el enjuague, siempre que estos hayan sido aprobados por el Departamento de Reglamentación de Pesticidas.

Disposición De Envases:

Todos los envases de pesticidas vacíos, tienen que ser desechados en la forma aprobada por el Departamento de Control De Substancias Tóxicas de Cal/EPA. Los envases de vidrio, de plástico o de metal, tienen que llevarse a un lugar autorizado para desechos. NO ENTIERRE NINGUN ENVASE DE PESTICIDA.

Para información acerca de los requerimientos locales, debe ponerse en contacto con el comisionado de agricultura local. En muchos condados, antes de desechar envases enjuagados, el empleador tiene que obtener un permiso o certificado extendido por el comisionado de agricultura.

Este folleto ayuda a los lectores a entender los reglamentos de pesticidas. No es un documento legal. La referencia legal puede encontrarse en el Código de Reglamentos de California, Artículo 3. Las palabras "tiene que" y "debe" usadas en este texto no significan lo mismo. Las palabras "tiene que" indican que la acción es obligatoria y deriva de las reglamentaciones de California. La palabra "debe" indica que se recomienda el uso de prácticas de seguridad adicionales para promover la redución a la exposición a pesticidas.

HS-711(s) Revisada 20 de Septiembre de 1998
R. Rutz, S. Edmiston
Traducción: A. Marín Welsh

Seguridad de Pesticida Información
Sección de Salud y Seguridad del Trabajador
Serie A

A-3(s) CONTROLES DE INGENIERIA EN ESCENARIOS AGRICOLAS
(Sistemas Cerrados, Cabinas Cerradas, Envases Solubles En Agua)

Información General:
Los controles de ingeniería son métodos usados para reducir la exposición (sistemas cerrados, cabinas cerradas, etc.) menos el equipo protector personal (respiradores, guantes, etc.). El vaceo manual de pesticidas altamente tóxicos, es una actividad muy peligrosa que ha resultado en muchas enfermedades y lesiones humanas serias. Además, la aplicación de pesticidas muy tóxicos por una persona que no está protegida, también ha resultado en muchas enfermedades y lesiones relacionadas con pesticidas. El uso correcto de los controles de ingeniería, tales como sistemas cerrados, cabinas cerradas, envases solubles en agua, reduce el potencial en exposición humana. Por otra parte, el uso incorrecto, la limpieza o mantenimiento de estos sistemas, también puede llevar a exposición excesiva. En muchas situaciones, la substitución del equipo de protección personal (PPE) requerido por la etiqueta del pesticida y los reglamentos de California se permite cuando se usan estos controles de ingeniería adecuadamente (vea Tabla 1).

Sistemas Cerrados:
En California, para la seguridad de los trabajadores los reglamentos requieren el uso de sistema cerrado cuando:

- los empleados manejan pesticidas líquidos, mezclas líquidas, o pesticidas líquidos diluídos, con la palabra "PELIGRO" ("DANGER") en la etiqueta.
- los empleados manipulan cualquier pesticidas de exposición mínima .

El requisito de sistema cerrado se solicita de todos los trabajadores que usan estos pesticidas en la producción de un cultivo agrícola. Hay una excención que permite a los empleados manipular hasta un galón de producto por día, en envases originales de un tamaño de hasta un galón, sin usar un sistema cerrado.

Un "sistema cerrado" es un proceso por medio del cual se traslada un pesticida de su envase original, enjuagando el envase vacío, y trasladando el pesticida y la solución enjuagada a través de mangueras conectoras, tuberías y acoples. Estos últimos deberán estar suficientemente apretados para evitar que alguna persona quede expuesta al pesticida o a la solución de enjuague. No se requiere enjuagar cuando el pesticida se usa sin diluír el envase, el envase puede volverse a usar o puede devolverse al que registró el pesticida. Si se usa un pesticida con la palabra "Peligro" en la etiqueta, se requiere un sistema de transferencia cerrado para la mezcla diluída.

Si usted usa un sistema cerrado, usted tiene que recibir entrenamiento acerca del uso correcto y las precauciones de seguridad necesarias durante su uso.

Usted tiene que ponerse PPE como lo exige la etiqueta y los reglamentos de California. Se permiten algunos substitutos para PPE exigido por la etiqueta, cuando se usa un sistema cerrado (Tabla 1). Todo PPE exigido en la etiqueta tiene que estar presente en el lugar de trabajo para su uso en los casos de emergencia. Sin embargo, en algunos casos se exige el uso de protección a la vista y guantes cuando se usa sistema cerrado (vea Tabla 1 para ver las exenciones).

Normas de California Para Los Sistemas Cerrados:
Para satisfacer los requisitos de California, un sistema cerrado tiene que:

- remover el pesticida del envase original
- enjuagar el envase
- trasladar el pesticida al tanque de mezcla
- estar hecho de materiales para el uso con pesticidas y con un sistema a presión
- proteger los indicadores visuales contra roturas.
- medir adecuadamente el pesticida que se está usando.
- tener válvulas de cierre para prevenir que el producto químico no se derrame cuando se desconecte la manguera.

No saque la sonda del envase a menos que el envase esté vacío y enjuagado, que el pesticida se usó sin diluir y que el envase esté vacío. Diríjase a la Agencia de Protección Ambiental de California, Departamento de Reglamentación de Pesticidas para mayor detalles acerca de normas para los sistemas cerrados. Usted puede obtener de DPR una lista de los sistemas cerrados que han sido evaluados y que cumplen con los requisitos señalados ((916) 445-3920).

El sistema tiene que limpiarse y mantenerse de acuerdo a las instrucciones del fabricante. Si el sistema no se construyó en forma comercial, éste tiene que mantenerse de acuerdo a un programa establecido. Tiene que mantenerse un registro de limpieza y mantenimiento.

Envases Solubles En Agua:

El uso de pesticidas en envases solubles en agua (WSP) se considera equivalente a la mezcla con un sistema cerrado. Además, diluciones de pesticidas en WSP, con la palabra señal "Peligro" ("Danger") en la etiqueta, deben transferirse a través de un sistema cerrado (e.g., desde un tanque de mezcla a un tanque de aplicación). NO rompa el WSP para usar parte del envase. Esto invalida la equivalencia a un sistema cerrado y pone al mezclador bajo un riesgo alto de exposición excesiva.

Cabina Cerrada:

El uso correcto de las cabinas cerradas reduce la exposición a los aplicadores, pilotos y los que señalizan una aplicación con banderas. Una cabina cerrada, es una barrera resistente a productos químicos e impide el contacto con pesticidas y superficies tratadas afuera de la cabina. Las cabinas cerradas pueden incluír una cabina de piloto de un pulverizador, o una cabina cerrada en un tractor, o un camión, o un automóvil con las ventanas y puertas cerradas. Hay dos tipos de cabinas cerradas:

- Cabinas con barrerras físicas solamente (puertas, ventanas, etc.) para prevenir una exposición.
- Cabinas cerradas aprobadas para la protección respiratoria. Esta cabina además de la barrera fisica, incorpora un sistema que filtra los polvos/rocíos y/o vapores/gases. Estas cabinas tienen que cumplir con ciertas normas y estar aprobadas por el director del Departamento de Reglamentación de Pesticidas (DPR)

Tabla 1: Reemplazos Que Se Permiten Cuando se Usa Controles de Ingeniería

Cuando se usa lo siguiente	Los manejadores de pesticidas pueden reemplazar:*	Por lo siguiente:
Sistemas cerrados para pesticidas con la palabra "Peligro" (Danger) o "Advertencia" (Warning).	Overoles, guantes resistentes a productos químicos y delantales (mandiles) resistentes a productos químicos	PPE requerido en la etiqueta del pesticida
Sistema cerrado para pesticidas con la palabra "Cuidado" (Caution)	Ropa de trabajo	PPE requerido en la etiqueta del pesticida
Sistema cerrado bajo presión positiva	Protección para los ojos**	
Al mezclar pesticidas en envases solubles al agua	Usar en envases solubles al agua	Uso de sistema cerrado
Cabina cerrada	Ropa de trabajo y protección respiratoria necesaria	PPE requerido en la etiqueta del pesticida
Cabina cerrada aceptable a cambio de protección respiratoria	Ropa de trabajo	PPE requerido en la etiqueta del pesticida
Cualquier pesticida	Traje resistente a productos químicos	Overoles y mandil resistentes a productos químicos

*Para cualquier reemplazo, todo PPE que se requiere en la etiqueta debe estar a mano en caso de emergencia

**Además de protección a los ojos, se requiere overoles, guantes resistentes a productos químicos y mandil para pesticidas con la palabra "Peligro" (Danger) o "Advertencia" o (Warning) o además de la ropa de trabajo para pesticidas con la palabra "Cuidado" (Caution) en la etiqueta

***El uso de pesticidas en envases solubles al agua es equivalente a la mezcla bajo un sistema cerrado. Además, la transferencia desde el tanque de la mezcla al tanque de aplicación debe hacerse con un equipo de transferencia cerrado.

Seguridad de Pesticida Información
Sección de Salud y Seguridad del Trabajador
Serie A

A-4(s) PRIMEROS AUXILIOS Y DESCONTAMINACION En Escenarios Agrícolas

Este folleto provee entrenamiento básico de primeros auxilios a empleados que trabajan con pesticidas. Esta información es general y es un suplemento de la información de primeros auxilios que aparece en las etiquetas de los pesticidas. Este folleto **no** satisface el requirimiento que el empleador provea cuidado médico de emergencia, ni el de arreglos anteriores para el cuidado médico de emergencia.

Enfermedades Que Se Pueden Sufrir Cuando Se Trabaja Con Pesticidas:

Si usted se enferma mientras está trabajando con pesticidas, deje de trabajar inmediatamente. Notifique al supervisor o a un compañero de trabajo que se siente enfermo. Tome las medidas necesarias para eliminar cualquier fuente de exposición contínua al pesticida.

- Vaya a un lugar donde pueda respirar aire puro.
- Quítese la ropa
- Dése un baño completo, incluyendo lavado del cabello, y póngase ropa limpia.
- NO se vuelva a poner la ropa contaminada hasta que se lave en forma adecuada.
- Si no hay una ducha disponible inmediamente, use cualquier agua disponible y lávese el cuerpo. Puede ser agua de una ducha, un grifo, una manguera, o una botella.

En todos los casos las instrucciones deben ser: NO ESPERE - DESCONTAMINESE INMEDIATAMENTE. Lleve la persona al servicio médico de emergencia más cercano. Bajo ninguna circunstancia debe permitirse que la persona quede sola o dejarla que maneje sola.

Si una persona se desploma repentinamente mientras está trabajando con pesticidas:

- retírela inmediatamente del lugar donde se está usando el pesticida
- administre cualquiera respiración artificial necesaria
- llame al 911 para ayuda de emergencia si es que hay un teléfono disponible
- advierta a los trabajadores de emergencia que la persona está contaminada con pesticidas.

RECUERDE: Un colapso repentino puede ser causado por un ataque al corazón u otra crisis médica que no esté relacionada con la exposición a pesticidas.

Todo la gente debe recibir entrenamiento de resucitación cardiopulmonar (CPR). La Cruz Roja Americana y la Asociación Americana del Corazón enseñan CPR. Contacte las oficinas locales de estas instituciones y planee el entrenamiento de individuos o grupos.

Siga los siguientes pasos cuando se auxilia a un individuo que se ha enfermado mientras trabajaba con pesticidas:

- pare la exposición
- reviva (si es necesario) y descontamine a la víctima (saque la ropa contaminada y lave la piel)
- asegúrese que la víctima sea llevada al servicio médico de emergencia más cercano.

Es importante darle al médico o al personal de la unidad de emergencia donde se lleve la víctima, toda la información que se tenga sobre la forma y circunstancias en que comenzó la exposición. Entregue al médico los nombres de los productos que el trabajador estaba usando o a los que estuvo expuesto. Cuando se lleva la víctima hay que hacer todo lo posible para llevar al médico una copia limpia de la etiqueta, o etiquetas. Si no es posible llevar la etiqueta cuando se lleva la víctima, escriba el nombre exacto del producto, el número de registro de EPA y los ingredientes activos, si es posible, para darle esta información al médico. Como último recurso, se puede entregar al médico un envase vacío limpio, o un envase lleno, sellado y con etiqueta.

(Puede ocurrir una exposición del personal de emergencia u hospitalario, si se cae y rompe un envase con pesticidas.)

Contaminación Repentina o Inmediata Con Pesticidas.

Los pesticidas se pueden absorber en el cuerpo:

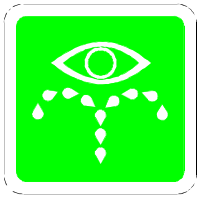
- al respirar polvo o vapores
- al contactar la piel o los ojos
- al tragarlos.

Si Se Respira Polvo O Vapores. En caso que se produzca un escape repentino de polvo o vapor de pesticidas:

- salga del lugar inmediatamente
- si usted se encuentra al aire libre, camine por lo menos 100 pies en dirección contraria al viento, alejándose del polvo o vapor
- si se encuentra adentro o en un lugar cerrado, salga inmediatamente al aire libre o a un lugar bien ventilado, alejado del polvo o vapores
- si usted encuentra a alguien que ha sido abatido por el polvo o vapores, llévelo inmediatamente lejos de los pesticidas, y proceda en la forma descrita para tratar a personas que han sufrido un colapso repentino al estar trabajando con pesticidas.

Si El Pesticida Cae En Los Ojos.

- Lávese los ojos con agua inmediatamente.
- Sostenga los párpados abiertos con la mano y échese agua lentamente sobre los ojos.
- Nunca use un chorro fuerte de agua directamente en los ojos ya que esto puede causarle daño.
- Use agua que esté saliendo despacio de una manguera o grifo.
- Lávese los ojos por lo menos durante 15 minutos.
- Si después de lavarse los ojos, tuviera dolor, molestia o dificultad para ver, lléve la persona afectada inmediatamente al servicio médico de emergencia más cercano.


LAVADO DE OJOS
(EYE WASH)

Si Se Derrama Pesticida Sobre La Ropa O La Piel.

Su piel **no** es una barrera absoluta que previene a pesticidas (y otras substancias químicas) pueden absorberse a través de su piel y entrar a su cuerpo. Algunos productos químicos se absorben muy rápidamente, mientras que otros son lentos. Es necesario quitar cualquier pesticida que esté en contacto con el cuerpo de una persona, ya sea de su cuerpo o de su ropa. Muchos pesticidas pueden eventualmente penetrar la ropa protectora, incluso la resistente al agua (impermeable). Todas las personas deben recordarse sobre los siguientes procedimientos.

- Quite inmediatamente la ropa contaminada.
- Lave las partes expuestas de su piel con jabón y agua.
- Lave adequadamente la ropa contaminada antes de usarla nuevamente.
- Si los síntomas de enfermedad aparecen después de un derrame de pesticida en la ropa o piel, lleve inmediatamente la persona afectada al centro médico de emergencia más cercano.

Si Se Traga Pesticidas.

- La víctima debe tomar sorbos de agua o leche.
- **NO** provoque el vómito en una persona que está inconsciente o aletargada.
- Llame al 911, a un médico, o al centro de control de envenenamiento más cercano, para que le aconsejen.

- **Revise la etiqueta del pesticida**. Algunas etiquetas indican que **no** se debe provocar el vómito. Provocar el vómito en una persona que ha tragado productos químicos cáusticos puede agravar la situación.
- **NO** dé líquidos a una persona que esté inconsciente o aletargada.
- Lleve inmediatamente la persona inconsciente o aletargada al servicio médico de emergencia más cercano.
- En los adultos el vómito se puede provocar administrando una onza de jarabe de ipecacuana, si se tiene a la mano. Para los niños la dosis del

jarabe de ipecacuana debe disminuirse proporcionalmente (dos a cuatro cucharaditas). El vómito por lo general tarda de 15 a 30 minutos en producirse después de administrarse el jarabe de ipecacuana.

- **NO** administre agua salada o soluciones de mostaza para provocar el vómito, como se recomienda en algunas etiquetas antiguas. Se ha comprobado que las soluciones de sal y mostaza son peligrosas para este uso.

Otra Información Util.

Su empleador tiene que colocar en el sitio de trabajo el número de teléfono, dirección y lugar físico del centro donde se da atención de emergencia.

Muchas localidades tienen centros regionales de información y control de envenenamientos; usted puede contactar cualquier centro de control de envenenamiento en California llamando al 1-800-764-7661. En caso que un trabajador tenga un incidente que pudiera ser envenenamiento, póngase inmediatamente en contacto con el centro regional de envenenamiento y este le dará la información necesaria para dar los primeros auxilios y resucitación. Provea la mayor información posible al centro regional respecto a lo sucedido y del pesticida involucrado. Si es necesario llevar a una víctima al servicio de emergencia, haga una llamada telefónica para ponerlos al tanto y así prepararse para atender la emergencia en mejor forma.

Seguridad de Pesticida Información
Sección de Salud y Seguridad del Trabajador
Serie A

A-5(s) PROTECCION A LAS VIAS RESPIRATORIAS
En Escenarios Agrícolas

Información General:
Este folleto proporciona a las personas que usan pesticidas, información básica sobre protección a las vías respiratorias y le ayuda a cumplir con los reglamentos de protección respiratoria de California, (Artículo 3 Código de Reglamentaciones de California 6738).

Los reglamentos requieren que los empleadores tengan en el lugar de trabajo, un programa de protección respiratoria por escrito. El programa tiene que cubrir la selección, el ajuste, el uso, la inspección, el mantenimiento y la limpieza de los aparatos respiradores. La adopción del contenido de esta Serie Informativa sobre Seguridad con Pesticida (PSIS), cumple con los requisitos mínimos del programa por escrito. El Apéndice 1 contiene muestra de los procedimientos por escrito.

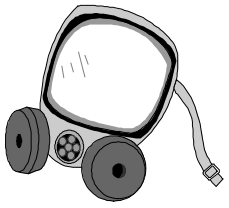
Condiciones Que Requieren Protección Respiratoria:
Los controles de ingeniería son la mejor manera de controlar los peligros de partículas aéreas. Ejemplos de controles de ingeniería incluye el encerramiento o restringimiento del proceso que produce el peligro, una ventilación para mantener la concentración de partículas suspendidas en el aire bajo los niveles aceptados, o el reemplazo con materiales menos tóxicos. En algunas situaciones, el uso de controles de ingeniería, tales como sistemas cerrados o cabinas cerradas, pueden liberar al trabajador del uso de protección respiratoria. (PSIS A-3 trata estas exenciones). A menudo, el uso de pesticidas crea un ambiente de trabajo peligroso. Si las concentraciones de pesticidas peligrosas no pueden controlarse de otras maneras, usted necesita usar el equipo respiratorio de protección personal. En situaciones de emergencia, donde la exposición es relativamente breve, usted también necesitaría protección respiratoria.

Las leyes federales y estatales requieren que las etiquetas de pesticidas contengan precauciones de seguridad. La etiqueta incluirá recomendaciones para la protección a las vías respiratorias, en caso que esta sea necesaria. Si usted va a estar expuesto a la neblina o rocío de pesticida, la protección a las vías respiratorias podría ser necesaria cuando se aplican productos cuyas etiquetas recomiendan que se "evite el rocío".

Su empleador tiene que proveer el equipo respiratorio exigido y usted tiene que usarlo. Su empleador tiene que proveer el equipo respiratorio para una exposición específica, y aprobado por el Instituto Nacional de Salud y Seguridad Laboral (NIOSH).

Entrenamiento:
Usted tiene que recibir un entrenamiento inicial sobre la necesidad, uso, cuidado higiénico y las limitaciones del equipo respiratorio que usted tendría que usar.

Selección y Ajuste del Equipo Respiratorio:
La selección de una mascarilla respiradora apropiada, es crítica. Las etiquetas de los pesticidas son la fuente principal de información acerca de la protección respiratoria necesaria. Con información de la etiqueta, un distribuidor de equipo de seguridad será capaz de proporcionar a su empleador con el tipo correcto de equipo respiratorio. Cuando se expone a pesticidas que irritan los ojos, nariz o garganta, use un respirador con careta, que cubra toda la cara, para protegerse de los irritantes. Si se usa respiradores que purifican el aire, el elemento purificador (filtro o cartucho) tiene que ser aprobado por NIOSH. Consulte a una de las firmas mencionadas al final de este folleto, para obtener ayuda adicional en el proceso de selección.



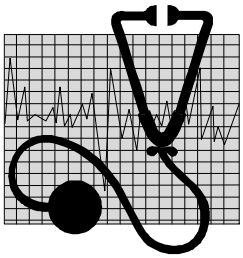
Los aparatos respiradores vienen en tamaños diferentes para ajustarse a caras de tamaño diferente. Cualquier persona que usa un respirador tiene que recibir entrenamiento de como ajustarlo adecuadamente y como probar que el equipo que usa funcione debidamente. Cuando se ajusta un respirador, uselo en aire no contaminado, para acostumbrarse a su uso. Después, uselo en una atmósfera de prueba.

Mantenimiento y Medidas Sanitarias:
Cuando sea necesario, su empleador tiene que reparar o reemplazar el equipo respiratorio, que esté desgastado o deteriorado. Una persona entrenada debe limpiar continuamente e inspeccionar frequentemente los respiradores de uso rutinario. La limpieza e inspección regular prolongan la duración y aseguran al que usa el respirador, que éste funciona en forma eficiente. Por consideraciones de higiene y para evitar la transmisión de enfermedades contagiosas, los respiradores no deben prestarse de un indivíduo a otro sin antes limpiarlos y desinfectarlos. Esta situación se puede evitar dándo un respirador a cada trabajador.

Cuando los respiradores no están en uso, guardelos de manera que la parte facial no se deforme y esté protegido de una exposición excesiva al polvo, luz solar, temperaturas extremas, humedad o productos químicos dañinos. Todos estos factores reducen la duración del respirador. Los envases de plástico con tapa sirven para guardar los respiradores adecuadamente.

Inspeccione los respiradores que se mantienen para situaciones de emergencia antes de usar, tales como máscaras contra gases y respiradores portátiles con cilindro de aire (SCBA). Si estos no se usan durante un mes, inspeccione y pruebe este equipo de emergencia, para que cuando lo necesite el funcionamiento sea seguro. Durante una inspección, mire para asegurarse de la limpieza, y que todas las partes existan y funcionen debidamente.

Evaluación Médica:
El respirar a través de un respirador requiere más esfuerzo que respirar normalmente. Para algunas personas éste esfuerzo es extremadamente difícil por diversas razones. Si se requiere que usted use un respirador, su empleador tiene que informarle que existen ciertas limitaciones médicas que pueden interferir con el uso de respiradores. Algunas de esas limitaciones médicas incluyen presión alta, enfermedad del corazón, enfermedad del pulmón o un tímpano del oído perforado. Si usted sufre una de estas condiciones, un médico tiene que examinarlo para determinar si usted puede realizar físicamente la labor asignada usando el equipo respiratorio. El médico debe determinar que condiciones de salud y capacidad física son pertinentes. Su empleador tiene que seguir las recomendaciones escritas del médico con respecto a su capacidad para usar equipo respiratorio. Su empleador tiene que mantener en los archivos evidencia escrita que usted fué informado. Antes que se requiera que un empleado realice una tarea que requiere protección respiratoria, tiene que haber una evaluación del médico en archivo para aquéllos empleados que indican una posible limitación medica.



Limitaciones:
Los respiradores tienen limitaciones. No protegen adecuadamente a la persona de todos los contaminantes bajo todas las circunstancias. Por lo general, el respirador típico de media cara con filtro purificador de aire, provee un factor de protección de 10, siempre que el respirador se use y esté ajustado correctamente.

Un respirador de cara entera con filtro purificador de aire provee un factor de protección de 50. El factor de protección mide la protección que provee al que usa un respirador, e indica la eficiencia que tiene el respirador en la reducción de la inhalación de los contaminantes del aire.

Los filtros y cartuchos purificadores de aire tienen una capacidad limitada para proteger contra gases y vapores tóxicos en el aire. Teóricamente, los filtros son efectivos contra gases y vapores tóxicos hasta

que lleguen a su capacidad máxima; más allá de esa capacidad, el vapor y los gases pasan a través del filtro hacia el respirador. Teóricamente, los cartuchos y filtros son efectivos contra vapores y gases tóxicos hasta que se termina su capacidad; entonces el vapor o gas pasa a través del cartucho y filtro hacia el interior del respirador. Si usted siente un olor o sabor, o irritación de los ojos o garganta, abandone inmediatamente el lugar de peligro; vaya a un lugar sin peligro que contenga aire puro. Entonces, inspeccione su respirador en busca de cualquier falla física. Usted tiene que cambiar los filtros o cartuchos del respirador si usted no encuentra un problema físico. Debido a que la capacidad efectiva de los filtros y cartuchos es limitada, y muchos pesticidas no dan señales de su presencia (olor o irritación), los reglamentos del Departamento de Reglamentación de Pesticidas exigen que los elementos purificadores de aire se cambien de acuerdo con el más común de lo siguiente:

- direcciones de la etiqueta del pesticida
- recomendaciones del fabricante del equipo
- a la primera indicación de olor, sabor o irritación
- al final de cada día de trabajo.

Los respiradores purificadores de aire (filtro o cartucho) no dan oxígeno a la persona que lo usa. No lo use cuando el contenido de oxígeno en el aire es bajo. En situaciones con contenido de oxígeno bajo, se necesita equipo capaz de suministrar una fuente de aire independiente, como por ejemplo un respirador portátil con cilindro de aire (SCBA), o un respirador con abastecedor de aire contínuo.

Los trabajadores que tienen bigotes, patillas largas o barba, no pueden trabajar en lugares donde se requiere protección a las vías respiratorias, a menos que le provean un respirador que no necesite ser ajustado a la cara para funcionar debidamente.

Los respiradores protegen contra la exposición por inhalación unicamente. En muchas situaciones cuando se usan pesticidas, también es necesario protegerse contra la exposición de la piel.

Fuentes de Información:

La lista que se da a continuación incluye varias organizaciones y personas que pueden darle información adicional:

1. Vendedores de equipos de seguridad - vea las páginas amarillas del directorio telefónico (Safety Equipment Retailers).
2. Consultores de seguridad y salud ocupacional.
2. Departamento de Reglamentación de Pesticidas, Sección de Salud y Seguridad del Trabajador (Department of Pesticide Regulation, Worker Health & Safety Branch) 830 K St., Sacramento, California 95814, teléfono (916) 445-4222.
3. Servicio de Consultas - Cal/OSHA (Cal/OSHA Consulting Service). Búsquelo en el directorio telefónico local en la sección de oficinas del Gobierno Estatal, Departamento de Relaciones Industriales (State Government Offices: Industrial Relations Department).
4. Comisionado de Agricultura del Condado (County Agricultural Commissioner). Búsquelo en la sección de oficinas de Gobierno del Condado, Comisionado Agrícola).
5. Departamento de Salud del Condado (County Health Department).
7. Compañías de seguros.

Este folleto ayuda a los lectores a entender los reglamentos de pesticidas. No es un documento legal. La referencia legal puede encontrarse en el Código de Reglamentos de California, Artículo 3. Las palabras "tiene que" y "debe" usadas en este texto no significan lo mismo. Las palabras "tiene que" indican que la acción es obligatoria y deriva de las reglamentaciones de California. La palabra "debe" indica que se recomienda el uso de prácticas de seguridad adicionales para promover la redución a la exposición a pesticidas.

MUESTRA PROCEDIMIENTOS ESCRITOS PARA LA SELECCION Y USO DE RESPIRADORES EN UN LUGAR ESPECIFICO

PROGRAMA PARA PROTECCION DEL SISTEMA RESPIRATORIO

Nombre de la Compañía_____

Dirección_____

_____

Persona Encargada del Programa_____

I. Selección de Respiradores

Para los siguientes usos de pesticidas, requeremos el uso de respiradores.

_____

_____

Nuestra selección de respiradores se basa en:

_____

Personal y respiradores seleccionados

Trabajador	Respirador
_____	_____
_____	_____
_____	_____

Además, tenemos lugares o momentos que se necesita de emergencia protección a las vías respiratorias.

_____

Para este uso hemos escogido los siguientes respiradores.

_____

II. Uso de Respiradores

_____

Los empleados mencionados recibieron entrenamiento en protección respiratoria.
El entrenamiento inicial lo dió _____(nombre)_____ el día_____(fecha)____.
Adjunta está una lista de entrenamiento más reciente.

Las inspecciones rutinarias del equipo respiratorio las hace _____(nombre)_____ periódicamente. El equipo que se mantiene para emergencias se inspecciona mensualmente. Se mantiene récord de la inspección más reciente de la máscara respiradora o de su envase.

DECLARACION DEL TRABAJADOR SOBRE SU CONDICION MEDICA

_____
(Nombre del Empleado en Letra de Imprenta)

De acuerdo con la Sección 6738 del Código de Regulaciones de California, hasta donde yo sepa, yo [ ] tengo, yo no [ ] tengo ninguna condición médica que pueda interferir con el uso de un respirador durante situaciones de exposición a substancias dañinas. Entiendo que enfermedades del corazón, presión de sangre alta, enfermedades de los pulmones o un tímpano perforado, requieren una evaluación médica específica por un médico antes que se pueda determinar que puedo usar un respirador sin ningún peligro.

_____ _____
(Firma del Trabajador) (Fecha)

INFORME DE LA EVALUACION MEDICA

De acuerdo con la Sección 6738 del Código de Regulaciones de California, he examinado al trabajador arriba mencionado y no encuentro en este momento razón médica que le impida a este trabajador usar un respirador que le permita trabajar en un ambiente expuesto a substancias dañinas.

Otros comentarios:_____

_____

_____

_____
(Nombre del Médico en letra de Imprenta)

_____ _____
(Firma del Médico) (Fecha)

Seguridad de Pesticida Información
Sección de Salud y Seguridad del Trabajador
Serie A

A-6(s) RESUMEN DE LAS REGLAMENTOS DE SEGURIDAD EN ESCENARIOS AGRICOLAS

REGLAMENTOS DEL CODIGO DE CALIFORNIA (CCR) ARTICULO 3, DIVISION 6

Los reglamentos de seguridad de pesticidas especifican prácticas de trabajo sin peligro para los empleados que manejan (manipulan) pesticidas o trabajan en áreas tratadas. El término "manejo" se refiere a cualquiera actividad relacionada con la aplicación de pesticidas. El manejo incluye la mezcla, carga, aplicación, reparación o limpieza de equipo contaminado, y el manejo de envases no enjuagados. El Departamento de Reglamentación de Pesticidas y el comisionado agrícola local exigen que se cumplan las reglamentaciones de seguridad. Los reglamentos tienen requerimientos importantes que observan.

Responsabilidades del Empleador y Empleado (CCR 6702):

Su empleador tiene que:

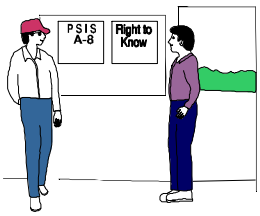
- saber los reglamentos y los requisitos señalados en la etiqueta del pesticida
- decirle en un lengüage que usted entienda, acerca de los pesticidas usados, peligros sobre seguridas con pesticidas, el equipo de protección requerido, otro equipo utilizado, procedimientos de trabajo, y reglamentos de seguridad sobre pesticidas
- asegurar que sus empleados trabajen sin peligro y sigan todas las reglas de seguridad

Los empleados tienen que:

- usar el equipo de protección personal (PPE)
- seguir las reglas de seguridad en los reglamentos y en la etiqueta de los pesticidas.

Comunicación de Peligro (CCR 6723, 6723.1, 6761, 6761.1):

La comunicación de peligros asegura que usted sepa los peligros que puede enfrentar y qué hacer para que usted se proteja de esos peligros. A través de una comunicación de peligros apropiada, usted sabrá acerca de los peligros, prácticas de trabajo sin peligro y dónde se encuentran los récords. La Serie Informativa de Seguridad de Pesticida (PSIS) folletos A-8 y A-9 son la comunicación escrita de los programas de comunicación de peligros para los que manejan pesticidas y trabajadores del campo, respectivamente.



Su empleador tienen que poner a la vista los PSIS A-8 y A-9, para que usted los pueda leer. Su empleador también tiene que desplegar para los que manejan pesticidas y trabajadores del campo lean lo siguiente:

- identificación del área tratada
- hora y día de las aplicaciones
- intervalo de entrada restringida (REI)
- nombre del pesticida, ingrediente activo y número de registro de EPA.

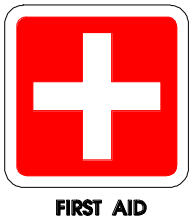
Su empleador tiene que poner a su disposición:

- los Datos sobre Seguridad de Productos Químicos (MSDS), si se pueden obtener, para los pesticidas usados.
- las hojas de PSIS que corresponden en la situación de uso.

Entrenamiento (CCR 6724, 6764, 6770):

Los empleados que manejan pesticidas tienen que recibir entrenamiento adecuado sobre el uso de pesticidas. Este entrenamiento tiene que darse antes que el trabajador comience a manejar los pesticidas. Los que manejan pesticidas tienen que recibir este entrenamiento todos los años. El entrenamiento de los que manejan pesticidas tiene que incluír lo siguiente para cada pesticida o para pesticidas del mismo grupo químico (tal como los organofosforados):

- el significado de la información de la etiqueta del pesticida relacionado con los efectos en la salud humana
- peligro del pesticida, incluso los efectos inmediatos y los de largo plazo
- síntomas de envenenamiento por pesticidas
- rutas por las cuales los pesticidas pueden entrar al cuerpo
- ayuda de primeros auxilios
- como obtener cuidado médico de emergencia
- procedimientos de descontaminación rutinarios y de emergencia



- necesidad, limitaciones, uso y limpieza del PPE exigido
- prevención, reconocimiento y ayuda de primeros auxilios para enfermedades relacionadas con el calor
- requerimientos de seguridad en el manejo de pesticidas
- preocupaciones por el medio ambiente
- advertencias de no llevar pesticidas a casa
- requerimientos reglamentarios, MSDS, y PSIS
- propósito y requerimiento de supervisión médica, cuando sea apropiada
- lugar donde se encuentran la comunicación de peligro por escrito, los folletos PSIS y MSDSs
- sus derechos como empleado.

Después de recibir entrenamiento, usted tiene que firmar el récord de entrenamiento. Estos récords tienen que guardarse en la oficina central del trabajo.

Los trabajadores del campo tienen que recibir entrenamiento cada cinco años; y tienen que recibir entrenamiento antes de trabajar en campos tratados. El entrenamiento tiene que incluír:

- importancia del lavado rutinario después de una exposición
- el significado de la colocación de los letreros y del REI
- dónde puede ocurrir una exposición a pesticidas
- rutas de exposición
- efectos a corto y largo plazo producidos por pesticidas

- síntomas de una exposición excesiva
- primeros auxilios y dónde se puede obtener atención médica de emergencia
- advertencias de no llevar pesticidas a casa
- el programa de comunicación de peligros
- sus derechos como empleado

Usted tiene el derecho a recibir información acerca de los pesticidas a los cuales puede estar expuesto (o la información puede entregarse a su médico). No lo pueden echar del trabajo por usar sus derechos.

Etiquetas Y Otras Advertencias (CCR 6602, 6618, 6674, 6678, 6776):

Las etiquetas tienen que estar a mano en el lugar de trabajo. Si los pesticidas se cambian del envase original, el envase nuevo tiene que tener una etiqueta que identifica el pesticida, la palabra señal que se obtiene de la etiqueta del producto, y el nombre de la persona y firma responsable.

Antes de aplicar pesticidas, el aplicador tiene que notificar al agricultor antes de hacer una aplicación. La notificación tiene que incluír:

- hora y día de la aplicación
- nombre, número de registro de EPA e ingrediente activo del pesticida usado
- precauciones de seguridad exigidas por la etiqueta o reglamentos
- ubicación del área tratada
- intervalo de entrada restringida (REI).

El agricultor es responsable de advertir a los empleados y contratistas que podrían entrar o caminar dentro de un cuarto de milla de la zona tratada. La advertencia tiene que incluír:

- lugar del área tratada
- cualquier REI
- instrucciones de no entrar al campo hasta que expire el REI.

El ranchero puede substituír la colocación de letreros en los campos tratados a cambio de advertencia oral, siempre que la etiqueta no exija advertencia oral además de la colocación de letreros en el campo.

Datos de Uso (CCR 6624. 6728 y 6778):

Se tienen que mantener récords acerca de cuándo y dónde se usaron pesticidas en cultivos agrícolas. El

empleador tiene que tener documentada la exposición de los empleados a pesticidas organofosforados o de N-metil carbamato, usados en la producción de productos agrícolas. Estos datos tienen que incluír el nombre de cada persona junto con el nombre del pesticida y la fecha de exposición.

Atención Médica de Emergencia (CCR 6726, 6766):
El empleador tiene que hacer arreglos de antemano para un servicio médico de emergencia, e indicarle el lugar dónde se encuentra la atención médica en caso que alguién se enferme o sufra un accidente en el trabajo. Si usted maneja pesticidas, su empleador tiene que colocar letreros en el lugar de trabajo (o en el vehículo de trabajo si no se tiene un lugar fijo de trabajo), con el nombre, dirección y número de teléfono del médico, clínica o sala de emergencia del hospital que puede darle atención médica. Su empleador tiene que asegurarse que lo lleven a un servicio médico de emergencia si usted se lesiona o se enferma mientras maneja pesticidas o se expone a resíduos de pesticidas en el trabajo.

Supervición Médica (CCR 6728):
Su empleador tiene que proveer una supervisión médica que incluye examenes periódicos de colinesterasa de la sangre, cuando se cumplan todas las condiciones siguientes:

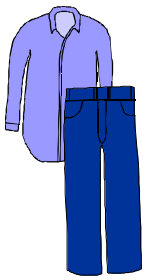
- usted mezcla, carga o aplica pesticidas organofosforados y carbamatos
- los pesticidas se usan en cultivos agrícolas
- los pesticidas tienen en la etiqueta la palabra señal "PELIGRO" (DANGER) o "ADVERTENCIA" (WARNING)
- usted usa estos pesticidas por más de seis días durante un período de 30 días.

El PSIS A-11 provee una explicación completa de la supervisión médica.

Descontaminación e Higiene (CCR 6732, 6734, 6793):
Si usted manipula pesticidas usados en cultivos agrícolas, su empleador tiene que proveer suficiente agua, jabón y toallas para el lavado rutinario de las manos y cara. Además, para los casos de emergencias, tiene que haber agua disponible para enjuagar sus ojos y lavar su cuerpo, en el sitio donde los empleados mezclan o cargan pesticidas y dentro de un cuarto de milla de otros trabajadores que manejan pesticidas. Guarde agua de lavarse separada del agua que se utililza en la mezcla con pesticidas. Los que manejan pesticidas tienen que llevar (o puede estar en el vehículo de aplicación) una pinta de agua para enjuagarse los ojos en caso de emergencia, y cuando la etiqueta exige el uso de protección a los ojos.

Si usted maneja pesticidas, su empleador tiene que tener un lugar para lavarse y cambiarse la ropa después del trabajo.

Overoles (CCR 6736, 6793):
Su empleador tiene que proveerlo con overoles limpios (de 1 o 2 piezas que cubran su cuerpo, salvo la cabeza, manos y pies) para cada día que usted manipule pesticidas con la palabra señal "PELIGRO" (DANGER) o "ADVERTENCIA" (WARNING) en la etiqueta, o cualquier pesticidas de exposición mínima. El empleador es responsable del lavado de esos overoles.



Controles De Ingeniería (CCR 6742, 6746, 6793):
Los controles de ingeniería son métodos utilizados para reducir la exposición (sistema cerrado, cabina cerrada, etc.) fuera de equipo de protección personal (respiradores, guantes. etc.). Los que manejan pesticidas pueden substituír el equipo protector cuando se usan ciertos controles de ingeniería. Vea PSIS A-3 para mayor explicación de los controles de ingeniería y los substitutos permitidos.

Todo equipo de aplicación tiene que ser inspeccionado antes de ser usado. Su empleador tiene que hacer cualquier reparación necesaria antes de su uso. Los tanques en el equipo de pesticida tiene que tener tapas para evitar derrames.

Los trabajadores que mezclan y cargan pesticidas líquidos, o mezclas líquidas, de pesticidas que tienen la palabra señal "PELIGRO" (DANGER), o cualquier pesticida de exposición mínima tienen que usar sistemas cerrados. Cuando se cargan pesticidas con la palabra señal "PELIGRO" (DANGER) o

"ADVERTENCIA" (WARNING), la manguera de carga tiene que tener al final una válvula de cierre, para evitar derrames cuando se quita del tanque acoplado al vehículo de aplicaciones.

Equipo Protector Personal (CCR 6738, 6793):

Su empleador tiene la obligación de proveer toda la ropa y equipo protector necesario (PPE) y tiene que ver que esté limpio y en buena condición. No se permite que usted lleve a casa su PPE para lavarlo. Generalmente, la etiqueta del pesticida en uso indica cuál PPE es necesario. Sin embargo, en California hay ciertos requisitos adicionales que no aparecen en las etiquetas.

Protección a los ojos - Se exige proteger los ojos en las situaciones siguientes:

- cuando lo establezca la etiqueta
- cuando mezcla, carga
- cuando aplica por tierra, excepto cuando inyecta o incorpora pesticidas en el suelo, cuando trabaja en cabina cerrada u opera un equipo con las boquillas ubicadas debajo o detrás y dirigidas hacia abajo.
- cuando aplica a mano, excepto cuando aplica cebo para vertebrados, cuando usa fumigantes sólidos, cuando usa trampas de monitoreo y atracción de insectos o aplica cebos que no son insecticidas
- cuando ajusta, limpia o repara equipo que maneja pesticidas
- cuando señaliza con bandera, excepto cuando está en una cabina cerrada.

La protección a los ojos incluye anteojos de seguridad (con protección a la frente, cejas y sien) gafas, careta facial, o una máscara facial completa como parte de protección respiratoria. Los anteojos regulares o de sol NO cumplen con estos requisitos.

Guantes - Tiene que usarse guantes cuando:

- lo establezca la etiqueta
- cuando mezcla, carga
- cuando repara el equipo contaminado
- en todas las aplicaciones manuales (excepto cuando se usan herramientas de mango largo en el control de plagas de vertebrados).

Los guantes tienen que cambiarse o lavarse todos los días. Es sumamente importante que los guantes se laven tanto por dentro como por fuera, porque en la parte de adentro, el guante puede acumular resíduo de pesticida. NO USE guantes de cuero ni algodón, salvo que se permita expresamente en la etiqueta del pesticida.

Equipo Respiratorio - Cuando se requiere protección respiratoria, el empleador tiene que adoptar por escrito los procedimientos para la selección, ajuste y mantenimiento general del equipo. Los empleados que tengan ciertas condiciones médicas, tales como enfermedades del corazón o pulmones, tienen que ser examinados por un médico antes de ser asignados a esta clase de trabajo. La protección respiratoria se explica plenamente en PSIS A-5.

Ropa Resistente A Substancias Químicas. - Pesticidas que causan peligros serios, requieren el uso de ropa resistentes a substancias químicas, calzado, sombrero y/o un delantal. Sin embargo, el uso de éste tipo de ropa en condiciones de temperaturas altas puede resultar en agotamiento por calor. Debido al peligro impuesto por el pesticida es imposible usarlo sin esta clase de protección, y es necesario seguir las siguientes normas: se prohibe a los empleados usar los pesticidas que exigen el uso de esta ropa cuando la temperatura sube sobre 80°F durante el día, o 85°F por la noche, a menos que se les suministre vestimenta de enfriamiento químico. Se permiten algunos substitutos a cambio de ropa resistente a productos químicos cuando se usen controles de ingeniería (vea PSIS A-3).

Limpieza y Reparación de Equipo (CCR 6744:

Si usted limpia o arregla equipo que se usa con pesticidas, tiene que estar bien informado y protegido de los peligros que existen al usar ese equipo.

Contacto con el Trabajador (CCR 6730):

Cuando un trabajador esté trabajando solo y esté usando pesticidas con la palabra señal "PELIGRO" (DANGER) en la etiqueta, tiene que estar en contacto

con otra persona, por lo menos cada dos horas durante el día, y cada hora durante la noche.

Fumigantes (CCR 6780, 6782, 6784):
Los fumigantes son pesticidas que se usan en forma de gas. Para la mayoría de los fumigantes se han establecido niveles permisibles de exposición (PEL). Estos niveles establecidos no se pueden sobrepasar. Su empleador tiene la responsabilidad de asegurar que usted no esté expuesto a niveles mayores que los establecidos o, en caso contrario, de darle la protección respiratoria aprobada. En lugares donde se usan fumigantes, su empleador tiene que tener un plan de acción, que indique al empleado que debería hacer en caso de derrame, escape, o incendio. Usted tiene que saber en que consiste este plan.

Usted no puede percibir algunos fumigantes ni por su olor, ni sabor, ni por irritación, ni a simple vista. Para estos fumigantes el empleador tiene que conocer o anticipar el peligro de exposición en el trabajo rutinario. Esto se hace midiendo los niveles de contaminantes en el lugar que se está fumigando, o usando el conocimiento de niveles existentes cuando se ha usado el mismo proceso en situaciones similares. Esto demostrará que existe una de las tres situaciones:

- su exposición no sobrepasa el PEL, por lo tanto no es necesario usar protección respiratoria
- su exposición sobrepasa el PEL, por lo tanto se requiere el uso de protección respiratoria aprobada
- su exposición es variable (es decir, hay momentos en que los niveles sobrepasan el PEL y otros momentos en que no lo sobrepasan).

En estos casos de incertidumbre usted tiene que usar protección respiratoria aprobada, a menos que haya un monitoreo contínuo en el sitio de trabajo. Si hay un monitoreo contínuo, el equipo respiratorio tiene que usarse únicamente cuando el medidor indique que se ha sobrepasado el PEL.

Dos personas entrenadas tienen que estar presente cuando se fumiga un espacio encerrado. Tiene que colocarse letreros de advertencia antes de comenzar una fumigación de espacios encerrados. Además, dos personas entrenadas tienen que estar presente cuando se fumiga un campo con bromuro de metilo y cuando se saca el plástico (siempre que se use).

Intervalo de Entrada Restringida (CCR 6770, 6772, 6774): El intervalo de entrada restringida es un período de tiempo que sigue a una aplicación de pesticida, y durante el cual se prohibe la entrada al campo para cosechar (cosecha manual, desahijar, deshierbar, amarrar, podar, apuntalar ramas, o hacer cualquier trabajo similar. Para muchos pesticidas el REI se establece en la etiqueta; otros se establecen por reglamento. Se tiene que cumplir con ambos.

Para actividades sin contacto, tales como operación del tractor, se permite la entrada siempre que se use protección especial, para evitar que el trabajador sea expuesto a residuos. Las personas que incorporan pesticidas al suelo durante un REI tienen que usar el mismo PPE que se exige a un aplicador. La gente puede entrar al campo durante la vigencia de un REI, para realizar actividades de contacto limitado, tales como riego, y siempre que se cumplan algunas condiciones. Esas condiciones incluyen:

- que la etiqueta no exija que se coloque letreros en el campo, ni que se de advertencia oral
- que por lo menos sea cuatro horas después de la aplicación
- que la exposición por inhalación sea bajo los niveles aceptables
- que la exposición sea mínima y se limite a los pies, parte baja de las piernas, manos y antebrazo
- que la persona use el PPE que se exige cuando el trabajador entra al campo antes que termine el intervalo de entrada
- que la persona no trabaje más de ocho horas en un campo tratado
- que la necesidad de la actividad sea imprevista.

Requerimiento De Entrada Prematura (CCR 6771):

- Si usted entra al campo antes que expire el REI, usted tiene que ser informado de los requerimientos de la etiqueta con respecto a:
- peligros de la salud
- primeros auxilios
- síntomas de envenenamiento
- uso del PPE exigido

- síntomas y primeros auxilios para enfermedades debido al calor
- necesidad de lavarse cuando se sale de un campo tratado.

Su empleador tiene que darle el PPE exigido para una entrada prematura. No se permite que usted lleve el PPE a casa para limpiarlo; la limpieza es responsabilidad de su empleador. Si la etiqueta del pesticida exige protección de los ojos, tiene quehaber para cada empleado una pinta de agua para lavarse los ojos. Los empleadores tienen que proveer a los trabajadores que entran prematuramente a los campos tratados, con jabón, agua y toallas para lavarse cuando se sacan su PPE.

Pesticidas de Exposición Mínima (CCR 6790-6793): Los siguientes pesticidas están en la lista de pesticidas de exposición mínima (MEP):

- propargite (Omite®, Comite®)
- folpet
- bromoxynil (Buctril®, Bromate®)
- oxydemeton-methyl (Metasystox®-R).

Debido a los peligros en su uso, estos pesticidas requieren normas de seguridad especiales sin importar a que categoría de toxicidad pertenezcan. Estas normas son:

- tiene que suministrarse un lugar para cambiarse la ropa
- en todos los sitios donde se mezclan o cargan estos pesticidas, tiene que haber facilidades para lavarse
- tiene que suministrarse ropa limpia todos los días
- tiene que usarse un sistema cerrado para pesticidas líquidos o para diluciones líquidas
- los empleados que manejan pesticidas de exposición mínima (MEP) tienen que usar ropa impermeable limpia o nueva (excepto cuando se usan algunos controles de ingeniería - vea PSIS A-3)
- tiene que usarse equipo respiratorio cuando se hacen aplicaciones manuales o terrestres (excepto cuando se usan algunos controles de ingeniería).

Exenciones:

Si usted trabaja para un consultor licenciado de control de peste, o un silvicultor profesional registrado y usted recibe entrenamiento adecuado, y a usted se le informa de cualquiera aplicación y sabe como contactar a su empleador, las siguientes medidas de los reglamentos de seguridad del trabajador no son pertinentes: descontaminación, cuidado médico de emergencia, overoles, equipo de protección personal y entrada prematura.

Las medidas de los reglamentos de seguridad del trabajador relacionadas con los que manipulan pesticidas no son pertinentes si usted usa productos del consumidor y su exposición es similar a la esperada en el consumidor.

Usted puede examinar una copia de estos reglamentos en la oficina del comisionado de agricultura de su condado.

Este folleto ayuda a los lectores a entender los reglamentos de pesticidas. No es un documento legal. La referencia legal puede encontrarse en el Código de Reglamentos de California, Artículo 3. Las palabras "tiene que" y "debe" usadas en este texto no significan lo mismo. Las palabras "tiene que" indican que la acción es obligatoria y deriva de las reglamentaciones de California. La palabra "debe" indica que se recomienda el uso de prácticas de seguridad adicionales para promover la redución a la exposición a pesticidas.

Pesticide Safety Information Series A

Worker Health and Safety Branch

A-1 SAFETY REQUIREMENTS FOR PESTICIDE HANDLERS

In Agricultural Settings

This leaflet explains pesticide safety requirements and guidelines for pesticide handlers in the agricultural setting. The term "handle" refers to any activity related to the application of pesticides. Handle includes mixing, loading, applying, repairing or cleaning contaminated equipment, and handling unrinsed containers.

Hazards of Pesticides:

Before a pesticide is sold, many tests are conducted to determine the possible health and environmental hazards. Pesticides (and other chemicals) can be absorbed through your skin and into your body to cause illness. Hand exposure contributes significantly to the overall hazard of handling pesticides. Protecting the skin is often the most difficult problem associated with pesticide use.

Labeling and Regulations:

Federal laws require specific precautions on pesticide labels to protect your health. In addition, every label must display a signal word that gives an indication of the acute health hazard. The signal words are as follows:

- "Danger" indicates the pesticide is extremely toxic
- "Warning" indicates moderate toxicity
- "Caution" indicates low toxicity.

Federal and State laws require that pesticides be used according to the requirements on the label. Additionally, the State establishes its own regulations. In some cases, State regulations are more strict than Federal laws; this protects you in use conditions specific to California. You must follow both pesticide labels and State regulations. In case of a conflict, follow the more strict requirement.

Interpretation of Label Safety Precautions:

Interpret the safety precautions on the label carefully. Take into account the signal word and the application situation. If the label says to avoid breathing spray mist, you should wear a respirator for protection from inhalation hazards. Hazardous conditions may occur in open areas if there is no wind and a temperature inversion occurs. The lack of air movement and higher temperatures create a potentially hazardous situation. On the other hand, too much wind creates a strong potential for drift onto people and nontarget crops. Assess the whole situation prior to handling any pesticide.

Use of engineering controls, such as closed systems and enclosed cabs, are always preferred over the use of personal protective equipment (PPE), such as a respirator, rainsuit, etc. In many situations, when engineering controls are used, handlers can wear less PPE. Substitutions allowed when using engineering controls are found in Pesticide Safety Information Series (PSIS) A-3, Table 1.

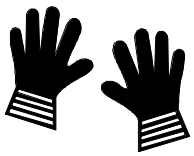
Hand pouring and moving (transporting) pesticide concentrates present the greatest hazard to the people involved. After a pesticide is mixed and loaded into the application equipment to be applied as a dilute liquid spray, the hazards decrease a little. However, even when handling the dilute solution, you should always try to avoid getting wet with the spray, regardless of the signal word on the label.

Specific Safety Precautions to Follow:

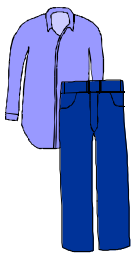
- Eye protection is required for most activities involving mixing/loading, application, equipment maintenance and flagging. There are exemptions for injection or incorporation of pesticides in the soil, having spray nozzles below the applicator and pointed downward, working in an enclosed cab, some applications of vertebrate baits or solid fumigants and applying non-insecticidal lures.

- Protective eyewear includes goggles, safety glasses (with brow and temple protection), a face shield, or full face mask (part of respiratory protection). Pilots can use a visor for eye protection. Regular eyeglasses and sunglasses DO NOT provide adequate eye protection.
- Employees involved in mixing and loading pesticides, pesticide equipment maintenance and hand application (including hand-held equipment) of pesticides must be provided with and use gloves.

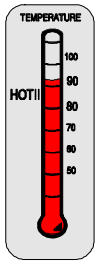
- Your employer must provide clean or new gloves each day.
- If the label does not list the type of glove needed, you must use gloves made of rubber, neoprene or other chemical-resistant material.



- In rare cases when the label specifically states that the handler not use gloves, they must not be worn.
- Wear respiratory protection when using pesticides that are toxic when inhaled, such as fumigants, powders, dusts, and some liquids.
- The type of respiratory protection required will be on the pesticide label.
- Your employer must have a written procedure for selecting, fitting, cleaning, sanitizing and maintaining respiratory equipment. See PSIS A-5 for additional information on respiratory protection.
- Some medical conditions, such as heart and lung disease, may prevent you from using respiratory protection. If you have these conditions, a physician must examine you prior to using respirators.
- Respiratory protection is also required for most handling activities involving pesticides on the Minimal Exposure Pesticide list (some exemptions exist). PSIS A-10 contains more information on Minimal Exposure Pesticides.
- A closed system is required to be used by all employees mixing/loading liquid pesticides or liquid mixes made from dry pesticides with the signal word "DANGER" on the label. See PSIS A-3 for more information on closed systems.
- If you handle pesticides with the signal word "DANGER" or "WARNING" on the label, your employer must provide you with clean coveralls (a one- or two-piece garment with long-sleeves and long pants) every day these pesticides are used. (This does not apply to those who handle fumigants, unless the label specifically requires use of coveralls.)



- If the pesticide label or California regulations require the use of chemical-resistant protection, your employer must provide a clean chemical-resistant suit, apron (if specified), footwear and headgear, that covers the body, feet and head.
- Due to the high temperatures that often exist in California, heat stress from use of chemical resistant clothing may present a greater hazard than pesticide exposure. In the absence of engineering controls, such as air-conditioned cabs, applications should be made at night or during the cooler portions of the day.
- If required to use a chemical resistant suit, you must not work in temperatures above 80°F in daylight hours or 85° during nighttime hours, unless wearing a cooled suit. Some exemptions from the chemical resistant clothing requirements exist for handlers (see PSIS A-3).



- Your employer must provide a place to change clothes and wash at the end of the day.
- Your employer must provide adequate water, soap and towels for washing your hands and face. They also must supply water for emergency eye flushing and washing the entire body in case of an accident.

Training:

California regulations require employees to be adequately trained before they handle pesticides. Your employer must have a written training program for employees who handle pesticides. For each pesticide or chemical group of pesticides, your training must include:

- the meaning of precautionary statements on the pesticide label
- information on the immediate and long-term hazards of the pesticides to be used
- routes pesticides can enter the body
- signs and symptoms of poisoning
- emergency first aid
- how to obtain emergency medical care
- routine and emergency decontamination procedures
- need for, limitations, use and cleaning of PPE
- prevention, symptoms and first aid for heat-related illness
- safety requirements and procedures
- environmental concerns
- instructions not to take pesticides or containers home
- applicable regulations, Material Safety Data Sheets, and PSIS leaflets
- the purpose of medical supervision, if applicable
- location of the written Hazard Communication Information (PSIS A-8)
- the employee's rights.

This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference is found in the California Code of Regulations, Title 3. The words "must" and "should" as used in the text are not the same. The word "must" means the action is required and comes from California regulations. The word "should" means additional handling practices that are recommended to reduce exposure.

Seguridad de Pesticida Información
Sección de Salud y Seguridad del Trabajador
Serie A

A-8(s) INFORMACION SOBRE LOS PELIGROS PARA LOS TRABAJADORES QUE MANEJAN PESTICIDAS EN ESCENARIOS AGRICOLAS

General:

Este folleto le entrega información sobre el derecho que usted tiene de saber sobre los peligros que existen en el trabajo e informarle también sobre los reglamentos del Departamento de Reglamentación de Pesticidas (DPR) relacionados con la información sobre estos peligros en California.

Dentro de los pesticidas se incluye una gran variedad de productos que comunmente se usan tanto en agricultura como en situaciones no agrícolas (como los jardines, parques, restaurantes u hospitales). Los insecticidas, herbicidas, desinfectantes, y los agentes antibacteriales se consideran pesticidas.

El propósito general de la información sobre los peligros en el uso de pesticidas es asegurar la identificación de cualquier peligro que pueda existir en el trabajo y que usted sea informado de estos peligros por medio de entrenamiento, a través de las etiquetas de los envases, y otras formas de advertencias. Su patrón tiene la responsabilidad de saber en que consiste ese peligro, y de informarle, en el idioma que usted entiende, sobre los pesticidas específicos que usted usará y como usted debe protegarse para usarlos sin peligro.

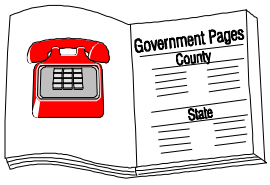
Derechos del Trabajador:

Las leyes exigen que a usted se le informe sobre los peligros que pueden existir en el sitio de trabajo. Tiene que entrenársele para que entienda esos peligros. Usted tiene ciertos derechos por ser empleado:

- Usted tiene derecho de ver los documentos sobre el uso de pesticidas y la Hoja Informativa de Seguridad de Productos Químicos (MSDS).
- Usted tiene derecho a presentar denuncias de condiciones peligrosas en el trabajo. Estas denuncias serán confidenciales y usted no será castigado por el patrón.
- La persona que le paga a usted tiene obligación de planificar y ver que usted sea llevado al médico si se enferma en el trabajo.
- Si usted se enferma o se lesiona en el trabajo, usted tiene derecho a presentar solicitud de compensación para los trabajadores (worker's compensation).

Su patrón (empleador) le explicará los derechos que usted tiene. Si usted necesita más ayuda para entender sus derechos, puede dirigirse a la oficina local del comisionado agrícola del condado, o la oficina de ayuda legal local, o la de los derechos de los trabajadores o a su unión.

Los pesticidas son sólo una de las substancias peligrosas que pueden encontrarse en el sitio de trabajo. La información sobre el peligro en el uso de otros productos está incluída en los reglamentos del Departamento de Relaciones Industriales (Cal/OSHA) bajo la Sección 5194 del Artículo 8 del Código de Reglamentaciones de California. Las denuncias sobre problemas con pesticidas deben presentarse al comisionado de agricultura del condado. Las denuncias sobre otros problemas de seguridad deben presentarse a Cal/OSHA. Los números de teléfono se pueden encontrar en las páginas de gobierno de la guía telefónica.



Identificación de Peligros:

La Agencia Federal de Protección Ambiental (USEPA) y DPR llevan a cabo identificaciones de los peligros de los pesticidas, y estas forman parte del proceso del registro y aprobación de la etiqueta del producto.

Este proceso tiene que completarse antes que el fabricante pueda vender el pesticida. Además de los ingredientes "activos" enumerados en la etiqueta del producto, los pesticidas por lo general contienen varios ingredientes "inertes," los que generalmente no son enumerados en la etiqueta. Estos ingredientes inertes también pueden tener propiedades tóxicas y peligros innatos. Sin embargo, si fuese necesario identificar los ingredientes inertes en caso de envenenamiento, el médico puede usualmente obtener esta información del fabricante o posiblemente de DPR.

La etiqueta del pesticida indica la toxicidad general y los peligros de sus ingredientes. En la etiqueta se usan ciertas palabras señales para dar información general sobre la posibilidad que el pesticida cause daño a los ojos o la piel, o envenenamiento, durante su uso. La palabra "PELIGRO" ("DANGER") le dice que el producto es muy peligroso. "ADVERTENCIA" ("WARNING") significa que el peligro es moderado, y "CUIDADO" ("CAUTION") quiere docir que el peligro es relativamente bajo. El fabricante está obligado a advertir los peligros, entregando la información específica o las precauciones necesarias en la etiqueta del pesticida.

- Si hay peligro de lesión grave a los ojos o la piel, la etiqueta tendrá la siguiente advertencia: "Corrosivo, causa daño a los ojos y a la piel."
- Si el pesticida es muy venenoso, la etiqueta tendrá una calavera con dos huesos cruzados y la palabra "VENENO" ("POISON").
- Las siguientes palabras también indican toxicidad alta: "fatal" o "puede ser fatal si se traga, se inhala o se absorbe por la piel."
- Algunas etiquetas advierten que se sabe o se sospecha que el pesticida puede causar cáncer, daño a ciertos órganos, o defectos de nacimiento.

Sin embargo, no debe dependerse totalmente de la etiqueta para identificar los peligros, ya que la nueva información puede demorarse en ser incluída en la etiqueta. Su patrón debe tener archivada una copia de la Hoja Informativa de Seguridad de Productos Químicos de los pesticidas usados. Otras fuentes de información pueden ser los boletines informativos de la industria, los avisos de peligro del gobierno, y los folletos de la Serie Informativa Sobre la Seguridad de Pesticidas (PSIS).

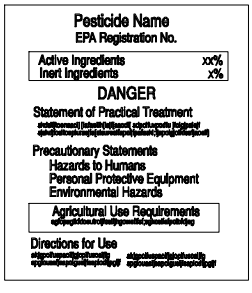
Entrenamiento y Educación:

El entrenamiento es una manera importante de informar a los trabajadores sobre los peligros en el uso de pesticidas y como protegerse de ellos. Si usted trabaja con pesticidas, tiene que recibir entrenamiento adecuado sobre su uso. Usted tiene que recibir este entrenamiento antes de empezar a trabajar con pesticidas y tiene que volverlo a tomar todos los años. Usted tiene que entender claramente los peligros inmediatos y a largo plazo que se presentan con el uso de pesticidas y debe conocer los procedimientos que debe seguir, para trabajar sin peligro con los pesticidas específicos que usted manejará, inclusive la operación del equipo y la ropa y equipo protector. El PSIS A-1 describe todo lo que tiene que cubrirse en el entrenamiento de pesticidas. Hay requisitos especiales de entrenamiento para las personas que tienen que usar protección para el sistema respiratorio (vea PSIS A-5). Todo entrenamiento tiene que ser documentado por escrito y tiene que ser firmado por usted.

Usted tiene que ser informado dónde y cómo puede obtener los documentos relacionados con el trabajo y los archivos que tienen que mantenerse (vea la Tabla 2). Usted también tiene que ser informado cómo puede obtener una copia de este folleto de la Serie Informativa de Seguridad (PSIS) en el uso de Pesticidas, la Hoja Informativa de Seguridad de Productos Químicos (MSDS), y los informes sobre el uso de pesticidas.

Etiquetas Y Otras Formas De Advertencias:

Además del entrenamiento hay varias otras maneras de darle a usted esta información (vea la Tabla 2). La etiqueta del producto provee instrucciones para su uso, las que legalmente hay obligación de cumplir, y da información de mucho valor sobre sus peligros. La etiqueta que describe los usos específicos del producto tiene que tenerse a la vista en el sitio de trabajo. Normalmente ésta es la etiqueta del envase. Sin embargo, si su uso se



describe únicamente en un boletín del producto o en una etiqueta adicional, o si se usa otro envase que no es el envase original de fábrica, el patrón tiene que asegurarse que la etiqueta apropiada esté a la vista.

Cuando sea posible, mantenga los pesticidas en sus envases originales y con la etiqueta original. Si por conveniencia se vierte pesticida en otros envases, no use envases de comida, bebidas, o productos caseros. Estos envases tienen que marcarse con el nombre del pesticida, la categoría de toxicidad, y el nombre de la persona o compañía responsable.

Los letreros de advertencia tienen que colocarse de manera que puedan verse desde todos los puntos de entrada al lugar donde se almacenan pesticidas o envases con la palabra "PELIGRO" (DANGER) o "ADVERTENCIA" (WARNING). Estas advertencias tienen que estar escritos en el idioma que usted entiende. Puede encontrarse más información sobre el almacenaje, transporte y disposición de pesticidas en la Serie Informativa Sobre la Seguridad de Pesticidas A-2.

El administrador de la propiedad tiene que asegurarse que usted y los otros trabajadores (incluso cualquier otro patrón que pueda tener trabajadores, como por ejemplo, el contratista) que estén en la propiedad tratada o que posiblemente entren a la propiedad, sean advertidos sobre la clase de pesticidas que se han usado y las precauciones que tienen que tomar, inclusive los intérvalos de entrada que estén en vigencia. Esto puede hacerse poniendo letreros alrededor del campo tratado. Si la etiqueta y los reglamentos no requieren letreros, a usted se le puede comunicar verbalmente. Siga las instrucciones de mantenerse fuera de los campos tratados o áreas restringidas.

En Noviembre de 1986, los votantes de California aprovaron una iniciativa para dirigirse a las preocupaciones relacionadas con las exposiciones a productos químicos tóxicos. Esta iniciativa pasó a llamarse Agua Potable Inocua y Ley de Cumplimiento de Substancias Tóxicas de 1986, y que se conoce como Proposición 65. La Proposición 65 requiere que el Gobernador publique una lista de productos químicos reconocido por el estado que causan cáncer, defectos de nacimiento y otros daños en el sistema reproductivo. Los productos químicos que causan cáncer se llaman **carcinógenos**; aquéllos que causan defectos de nacimiento y otros daños en el sistema reproductivo se llaman **venenos reproductivos.** La lista de la Proposición 65 contiene una clasificación comprensiva de productos químicos, incluso tintes, solventes, pesticidas, drogas, y aditivos de alimentos. Si un pesticida está en la lista, su empleador (patrón) tiene que advertirle si usted está expuesto a niveles de pesticida que presentan un riesgo significante a su salud. Un empleador podría elegir en proporcionarle advertencias simplemente basadas en la presencia de productos químicos, aunque el riesgo sea insignificante. En caso de exposición de pesticidas en los trabajadores, esta advertencia se le proporciona a través de los procedimientos requeridos en la comunicación de peligro. Cómo productor de un cultivo agrícola, se requiere que su patrón mantenga información específica de la aplicación de los pesticidas usados. Usted tiene el derecho de ver esta información y usted debería haber aprendido en su entrenamiento del lugar dónde se encuentra ésta información. Si usted no está seguro de la ubicación de esta información, pregúntele a su supervisor o empleador. El cuadro a continuación enumera los ingredientes activos actualizados que están registrados en la lista de la Proposición 65.

Tabla 1
PESTICIDAS ACTUALMENTE REGISTRADOS EN LA LISTA DE LA PROPOSICION 65

PESTICIDAS CONOCIDOS POR EL ESTADO DE CAUSAR CANCER

Acifluorfeno	Daminosido	Formaldehído (gas)	Orto fenil fenato sódico
Alacloro	DDVP (diclorfos)	Iprodione	(o-fenil fenol, sódico)
Acido arsénico	Para-dichlorobenceno	Lindano	Dicromato de potacio
Pentóxido de arsénico	(*r*-Diclorobenceno)	Mancozeb	Propargita
Trióxido de arsénico	1.3-Dicloropropeno	Maneb	Pronamide (propizamida)
Acido cacodílico	Isocincomeronato de	Metam sodio	Oxido de propileno
Captan	dipropilo (MGK	Metiram	Aerogel de sílice
Clorotalonilo	repelente 326)	Aceite mineral	Bicromato de sodio
Acido crómico	Oxido de etileno	Oxadiazona	dihidratado
Creosota	Folpet	Pentaclorofenol	Dicromato de sodio

PESTICIDAS CONOCIDOS POR EL ESTADO QUE CAUSAN TOXICIDAD EN EL DESARROLLO DEL INFANTE

Pentóxido arsénico	Octanoato de bromoxinil	Bromuro de metilo (como	Oxadiazon
Trióxido arsénico	Cianazina	fumigante de estructuras)	Sulfato de estreptomicina
Benomilo	Oxido de etileno	Nicotina (sulfato de	Vinclozolina
Heptanoato de bromoxinil	Metam sodio	nicotina)	Guarfarina

Monitoreo De Exposición:
Si usted maneja con regularidad (maneja el pesticida por más de 6 días dentro de cualquier período de 30 días) pesticidas organofosforados o carbamatos que se usan en cultivos agrícolas y que tienen las palabras "PELIGRO" (DANGER) o "ADVERTENCIA" (WARNING), en la etiqueta, es necesario que reciba supervisión médica y examenes de sangre para determinar si ha habido exceso de exposición. Estos requisitos están incluídos en la Serie Informativa Sobre la Seguridad de Pesticidas A-11.

En este lugar: SE USAN _____
NO SE USAN ____
estos pesticidas en cultivos agrícolas.

Si se usan en cultivos, y los maneja cualquiera persona:
_____ Cada 30 días, durante seis días o menos.
_____ En 30 días, durante más de seis días.

Si son manejados regularmente por una persona, el médico que supervisa es:

Nombre _____

Domicilio _____

_____

Número de teléfono _____

Documentación:.
Hay ciertos documentos que su patrón tiene que archivar y que deben estar a su disposición (vea Tabla 2). Estos documentos pueden catalogarse en tres categorías generales: entrenamiento, exposición y supervisión médica.

Después que usted los firme, su empleador tiene que mantener la documentación del entrenamiento que usted recibió. También tiene que guardarse los documentos que describen en qué consistió el entrenamiento. Su empleador también tiene que llevar una documentación de casi todas las clases de pesticidas usados. Si se usan pesticidas organofosforados o carbamatos como se describe en el párrafo titulado monitoreo de exposición, estos datos tienen que incluír el pesticida, la fecha y el nombre de la persona que lo usó. Si regularmente se usan pesticidas organofosforados o carbamatos, su empleador tiene que mantener documentos que verifican la supervisión médica y la acción tomada en caso que hubiese exposición excesiva.

Los documentos requeridos se mantienen en la siguiente localidad en la oficina principal:

_____

_____

_____

Atención Médica De Emergencia:
Si usted se enferma o lesiona en el trabajo, tiene que ser llevado para recibir atención médica a:

_____

_____

_____

Puede encontrar más información sobre primeros auxilios en la Serie Informativa Sobre la Seguridad de Pesticidas A-4.

Este folleto ayuda a los lectores a entender los reglamentos de pesticidas. No es un documento legal. La referencia legal puede encontrarse en el Código de Reglamentos de California, Artículo 3. Las palabras "tiene que" y "debe" usadas en este texto no significan lo mismo. Las palabras "tiene que" indican que la acción es obligatoria y deriva de las reglamentaciones de California. La palabra "debe" indica que se recomienda el uso de prácticas de seguridad adicionales para promover la redución a la exposición a pesticidas.

Tabla 2
RESUMEN DE DOCUMENTOS Y RECORDS SOBRE INFORMACION DE PELIGROS

Documento/Record	Retención	Localización	Sección
Documentación de entrenaminento	2 años	Oficina principal	6724(e)
Programa de entrenamiento escrito	2 años	Oficina principal	6724(a)
Procedimientos del programa de máscara respiradora	Durante el uso	Oficina principal	6738(h)
Plan de respuesta a emergencia (fumigantes)	Durante el uso	Sitio de trabajo	6780(d)
Etiquetas de pesticidas	Durante el uso	Sitio de trabajo	6602
Serie Informativa sobre la Seguridad de Pesticidas	2 años	Oficina principal	6723(b)
Hoja Informativa de Seguridad de Productos Químicos	2 años	Oficina principal	6723(b)
Metodología para notificación de tratamientos[1]	2 años	Oficina principal	6619
Letreros en el campo[1]	Durante el uso	Sitio de trabajo	6776
Letrero para zona de almacenamiento[3]	Durante el uso	Sitio de trabajo	6674
Aviso de identificación del médico supervisor	Durante el uso	Oficina principal	6728(a)
Acuerdo del patrón para supervisión médica[2]	3 años	Oficina principal	6728(b)
Recomendaciones del médico supervisor [2]	3 años	Oficina principal	6728(c)
Resultados del examen de sangre ChE[2]	3 años	Oficina principal	6728(c)
Revisión de las normas de trabajo del patrón[2]	3 años	Oficina principal	6728(d)
Aviso de atención médica de emergencia	Durante el uso	Sitio de trabajo	6726
Evaluación médica (uso de máscaras respiradoras)	Durante el uso	Oficina principal	6738(h)
Documentación del uso de pesticidas	2 años	Oficina principal	6624
Documentación sobre exposición de los empleados a pesticidas[2]	3 años	Oficina principal	6728

---

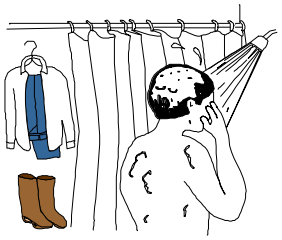
1 Producción agrícola
2 Palabras "PELIGRO" o "ADVERTENCIA", organofosforados y carbamatos, producción agrícola
3 Palabras "PELIGRO" o "ADVERTENCIA"

Información adicional sobre estos requisitos está disponible en la oficina del Comisionado de Agricultura de su condado.

HS-1571(s) Revisada 20 de Septiembre de 1998
R. Rutz, S. Edmiston
Traducción: A. Marin Welsh

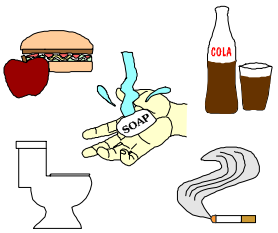
CONSEJOS DE SEGURIDAD

- Proteja su piel
- Use ropa con manga larga y pantalones largos, zapatos o botas, calcetines, un sombrero o una bandana y guantes
- Asegúrese que estén limpios y sin roturas



- Dése un baño o una ducha después del trabajo y apenas llegue a casa
- Lávese con jabón y champú
- Póngase ropa limpia

- Los pesticidas se adhieren a la ropa de trabajo y después pasan a la piel
- Lave la ropa de trabajo antes de volverla a usar
- Lave la ropa de trabajo separada de otra ropa



- Lávese siempre las manos antes de comer, beber, mascar chicle, fumar, y antes de ir al baño
- No cocine con leña que ha encontrado en el campo

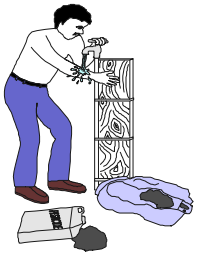
- Nunca ponga pesticidas en envases de alimentos
- No lleve a casa los pesticidas que usa en el campo ni sus envases
- Mantenga los niños alejados de los pesticidas

ENFERMEDAD/LESION

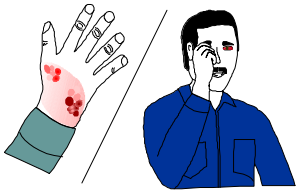
- Los pesticidas se adhieren a su piel y ropa cuando toca plantas rociadas con pesticidas, suelo, agua de riego o ha sido expuesto a deriva del rocío
- Se pueden mover desde su ropa a su piel
- Algunos pesticidas pueden atravesar su piel y pueden enfermarlo

- Avísele al jefe si está enfermo o se ha lesionado en el trabajo
- Si la enfermedad/lesión es a causa del trabajo, su empleador pagará todo el cuidado médico de esa enfermedad
- Si la enfermedad o lesión es a causa del trabajo su empleador pagará todo el tiempo que no pueda trabajar

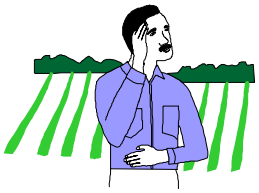
PRIMEROS AUXILIOS



- Lávese inmediatamente con agua limpia que esté más cerca, si ha sido salpicado y expuesto al rocío
- Cambiese a ropa limpia
- Después de lavarse avísele a su jefe



- Lávese si siente picazón o quemazón en los ojos o la piel
- Use bastante agua
- Avísele a su jefe que debe ir al médico



- Si siente enfermo en el trabajo (dolor de cabeza, dolor de estómago, vómito, mareo) avísele a su jefe
- El o ella se encargará de que lo lleven a un médico

- Que lo lleven al médico y nunca maneje usted si está enfermo o lesionado

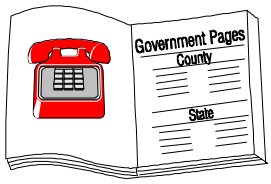
Seguridad de Pesticida Información
Sección de Salud y Seguridad del Trabajador
Serie A

A-9(s) INFORMACION SOBRE PELIGROS PARA LOS TRABAJADORES QUE TRABAJAN EN EL CAMPO

General:

Este folleto le informa sobre el derecho que usted tiene de saber sobre los peligros que existen en el trabajo. Este folleto también ayudará a su patrón a cumplir con estos reglamentos. Su patrón tiene la responsabilidad de saber en que consiste ese peligro, y de informarle, en el idioma que usted entiende, sobre los pesticidas que se han usado y como debe usted protegerse de ellos.

Los pesticidas son sólo una de las substancias peligrosas que pueden encontrarse en el sitio de trabajo. El Departamento de Relaciones Industriales del estado (Cal/OSHA) cubre la información sobre el peligro de otros materiales bajo la Sección 5194 del Artículo 8 del Código de Reglamentaciones de California. Las denuncias sobre problemas con pesticidas deben presentarse al comisionado de agricultura del condado. Las denuncias sobre otros problemas de seguridad deben presentarse a Cal/OSHA. Los números de teléfono se pueden encontrar en las páginas de gobierno de la guía telefónica.



Sus Derechos Como Trabajador:

Las leyes exigen que a usted se le informe sobre los peligros que pueden existir en el sitio de trabajo. Además, que se le entrene para tratar esos peligros. También, hay un sistema de advertencias para que usted sepa cuando se presenta un peligro. Como empleado usted tiene ciertos derechos:

- Usted tiene derecho a ver los documentos sobre Datos de Seguridad de Productos Químicos (MSDS) y los informes sobre el uso de pesticidas.
- Usted tiene derecho a presentar denuncias de condiciones peligrosas en el trabajo. Estas denuncias serán confidenciales y usted no será castigado por el patrón.
- La persona que le paga a usted tiene obligación de planificar y ver que a usted lo lleven al médico si se enferma en el trabajo.
- Si usted se enferma en el trabajo, tiene derecho a presentar solicitud de compensación para los trabajadores (worker's compensation).

Su patrón (empleador) le explicará los derechos que usted tiene. Si usted necesita más ayuda para entender sus derechos, dirijase a la oficina local del comisionado agrícola del condado, o la oficina de ayuda legal local, o la de los derechos de los trabajadores o a su unión.

Identificación De Los Peligros:

Antes de vender y usar un pesticida en California, este es sometido a un cuidadoso estudio para determinar si puede tener efectos dañinos en las personas. Los fabricantes de pesticidas le dicen en la etiqueta del producto como reducir estos peligros. Por eso en las etiquetas se exige el uso de cierta ropa protectora, y explican porqué después de aplicar un pesticida hay que dejar pasar cierto tiempo antes que usted pueda regresar al campo.

Intervalos de Entrada Restringida:

Bajo ninguna circunstancia debe usted entrar a un campo hasta por lo menos 4 horas después de la aplicación un pesticida. Después de aplicar un pesticida en el campo este empieza a disiparse. Algunos pesticidas toman más tiempo en disiparse que otros. El "intérvalo de entrada" es el tiempo que se demora el pesticida en disiparse de manera que se pueda volver a trabajar sin peligro.

Generalmente, no debe hacerse ningún trabajo en el campo durante el intervalo de entrada si durante ese trabajo usted tiene que tocar las plantas u otras cosas tratadas. Esto incluye cosecha manual, deshijado, desmalezar, amarrado, poda, apuntalar, desyemar, anillado y otros trabajos que requieren que usted toque las plantas. Algunas etiquetas de pesticidas permiten que se trabaje durante el intervalo de entrada (REI).

Durante el intervalo de entrada, pueden hacerse sin peligro trabajos de riego, y pueden manejarse tractores, siempre y cuando a usted se le advierta y se proteja. Si usted entra a un campo antes que termine el intervalo de entrada, usted tiene que protegerse usando equipo protector personal que se especifica en la etiqueta. Si usted maneja equipo de riego que no está contaminado y el contacto con las hojas y otras superficies tratadas es limitado, usted puede trabajar durante 8 horas al día. Si usted maneja equipo de riego que estaba en el terreno durante la aplicación, y el contacto con el follaje no es limitado, su tiempo de trabajo puede ser reducido a 1 hora de trabajo por día.

Si durante el intervalo de entrada usted riega, maneja tractores o hace otro trabajo en un campo tratado recientemente, se le debe informar a usted sobre lo siguiente:

- acerca del pesticida y el REI
- como trabajar sin peligro
- usted debe darse una ducha o un baño después del trabajo.

Su empleador tiene que proveerlo de equipo protector personal requerido.

Advertencias:

El agricultor tiene que informar a usted y a otras personas que pudieran entrar en el campo tratado (incluyendo invernaderos):

- sobre los pesticidas usados
- cuánto tiempo deben permanecer fuera de ese campo
- qué tienen que hacer para protegerse.

Si a usted le paga un contratista, ese contratista tiene la obligación de advertirle estas cosas. Siga las instrucciones de permanecer fuera de las áreas tratadas.

En Noviembre de 1986, los votantes de California aprovaron una iniciativa para dirigirse a las preocupaciones relacionadas con las exposiciones a productos químicos tóxicos. Esta iniciativa pasó a llamarse Agua Potable Inocua y Ley de Cumplimiento de Substancias Tóxicas de 1986, y que se conoce como Proposición 65. La Proposición 65 requiere que el Gobernador publique una lista de productos químicos reconocido por el estado que causan cáncer, defectos de nacimiento y otros daños en el sistema reproductivo. Los productos químicos que causan cáncer se llaman **carcinógenos**; aquéllos que causan defectos de nacimiento y otros daños en el sistema reproductivo se llaman **venenos reproductivos.** La lista de la Proposición 65 contiene una clasificación comprensiva de productos químicos, incluso tintes, solventes, pesticidas, drogas, y aditivos de alimentos. Si un pesticida está en la lista, su empleador (patrón) tiene que advertirle si usted está expuesto a niveles de pesticida que presentan un riesgo significante a su salud. Un empleador podría elegir en proporcionarle advertencias simplemente basadas en la presencia de productos químicos, aunque el riesgo sea insignificante. En caso de exposición de pesticidas en los trabajadores, esta advertencia se le proporciona a través de los procedimientos requeridos en la comunicación de peligro. Cómo productor de un cultivo agrícola, se requiere que su patrón mantenga información específica de la aplicación de los pesticidas usados. Usted tiene el derecho de ver esta información y usted debería haber aprendido en su entrenamiento del lugar dónde se encuentra esta información. Si usted no está seguro de la ubicación de ésta información, pregúntele a su supervisor o empleador. El cuadro a continuación enumera los ingredientes activos actualizados que están registrados en la lista de la Proposición 65.

Tabla 1
PESTICIDAS ACTUALMENTE REGISTRADOS EN LA LISTA DE LA PROPOSICION 65

PESTICIDAS CONOCIDOS POR EL ESTADO DE CAUSAR CANCER

Acifluorfeno	Daminosido	Formaldehído (gas)	Orto fenil fenato sódico
Alacloro	DDVP (diclorfos)	Iprodione	(o-fenil fenol, sódico)
Acido arsénico	Para-dichlorobenceno	Lindano	Dicromato de potacio
Pentóxido de arsénico	(ρ-Diclorobenceno)	Mancozeb	Propargita
Trióxido de arsénico	1.3-Dicloropropeno	Maneb	Pronamide (propizamida)
Acido cacodílico	Isocincomeronato de	Metam sodio	Oxido de propileno
Captan	dipropilo (MGK	Metiram	Aerogel de sílice
Clorotalonilo	repelente 326)	Aceite mineral	Bicromato de sodio
Acido crómico	Oxido de etileno	Oxadiazona	dihidratado
Creosota	Folpet	Pentaclorofenol	Dicromato de sodio

PESTICIDAS CONOCIDOS POR EL ESTADO QUE CAUSAN TOXICIDAD EN EL DESARROLLO DEL INFANTE

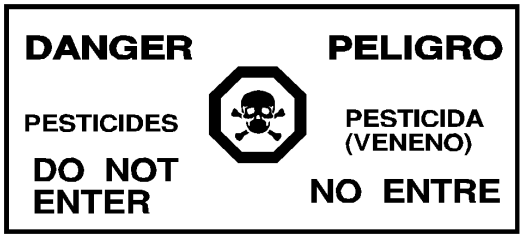
Pentóxido arsénico	Octanoato de bromoxinil	Bromuro de metilo (como	Oxadiazon
Trióxido arsénico	Cianazina	fumigante de estructuras)	Sulfato de estreptomicina
Benomilo	Oxido de etileno	Nicotina (sulfato de	Vinclozolina
Heptanoato de bromoxinil	Metam sodio	nicotina)	Guarfarina

Letreros:

El agricultor tiene que poner letreros como el siguiente, cuando:

- es requerido por la etiqueta del pesticida
- un pesticida se aplica en un invernadero
- hay un intérvalo de entrada de más de una semana.

Para algunos pesticidas, el letrero se verá como el siguiente:



Los reglamentos no requieren letreros para todos los REI's. Los letreros tienen que ponerse en los lugares que comunmente se usan para entrar al campo y cada 600 pies a lo largo de caminos sin cerca. Estos letreros tienen que ponerse antes de empezar la aplicación y tienen que permanecer en su lugar hasta que termine el intervalo de entrada.

Entrenamiento:

Todo empleado que trabaja en campos tratados con pesticidas, tienen que recibir entrenamiento por lo menos cada cinco años. El entrenamiento tiene que incluír:

- la importancia de lavarse las manos en forma rutinaria después del trabajo
- explicación de los REI's y de los letreros
- donde se pueden encontrar los resíduos de pesticidas
- las vías de exposición
- los peligros de los pesticidas
- síntomas de exposición excesiva
- primeros auxilios
- advertencias acerca de llevar pesticidas a casa
- programa de comunicación de los peligros
- sus derechos como empleado.

La gente se enferma por muchos motivos, ya sea en la casa o en el trabajo. Los pesticidas pueden hacerlo sentir mal. Los síntomas pueden ser iguales

a los de la gripe u otras enfermedades comunes. Si cuando está trabajando en el campo le dá dolor de cabeza, mareo, o malestar de estómago, visión borrosa, u otros síntomas de gripe, erupciones en la piel o irritación de los ojos, debe pedirle a su patrón que lo lleve al médico. Estos síntomas pueden ser causados por exposición a un pesticida. Su empleador debe planear su atención médica y ver que usted sea llevado al médico si se enferma o se lesiona en el trabajo.

Los pesticidas, y las plantas e insectos del campo pueden causar erupciones en la piel de los trabajadores. Después de trabajar en el campo, es importante darse una ducha o un baño para remover cualquier pesticida o secreciones de plantas que puedan causar erupciones en la piel o enfermedad. Si a usted se le pide que mezcle o aplique pesticidas, usted debe recibir más entrenamiento para que pueda hacer ese trabajo en forma segura.

Documentación:

El agricultor tiene que mantener una copia del informe del uso de pesticidas, y tiene que permitir que usted lo vea. El agricultor también tiene que tener información sobre los pesticidas que se han usado. La Hoja Informativa Sobre Seguridad de Productos Químicos (MSDS) de los pesticida usados, tiene que guardarse para que usted las pueda ver aún cuando usted trabaja para un contratista. Estos documentos están disponibles en el siguiente lugar:

_____

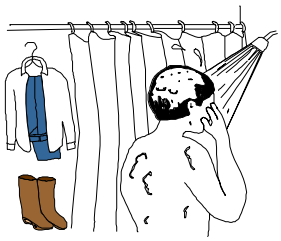
_____

Se puede obtener información adicional sobre estos requisitos en la oficina del comisionado de agricultura de su condado.

Este folleto ayuda a los lectores a entender los reglamentos de pesticidas. No es un documento legal. La referencia legal puede encontrarse en el Código de Reglamentos de California, Artículo 3. Las palabras "tiene que" y "debe" usadas en este texto no significan lo mismo. Las palabras "tiene que" indican que la acción es obligatoria y deriva de las reglamentaciones de California. La palabra "debe" indica que se recomienda el uso de prácticas de seguridad adicionales para promover la redución a la exposición a pesticidas.

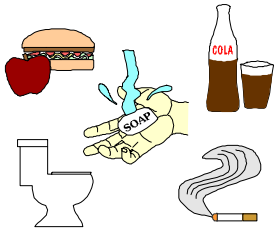
CONSEJOS DE SEGURIDAD

- Proteja su piel
- Use ropa con manga larga y pantalones largos, zapatos o botas, calcetines, un sombrero o una bandana y guantes
- Asegúrese que estén limpios y sin roturas



- Dése un baño o una ducha después del trabajo y apenas llegue a casa
- Lávese con jabón y champú
- Póngase ropa limpia

- Los pesticidas se adhieren a la ropa de trabajo y después pasan a la piel
- Lave la ropa de trabajo antes de volverla a usar
- Lave la ropa de trabajo separada de otra ropa



- Lávese siempre las manos antes de comer, beber, mascar chicle, fumar, y antes de ir al baño
- No cocine con leña que ha encontrado en el campo

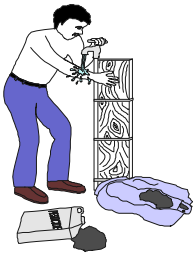
- Nunca ponga pesticidas en envases de alimentos
- No lleve a casa los pesticidas que usa en el campo ni sus envases
- Mantenga los niños alejados de los pesticidas

ENFERMEDAD/LESION

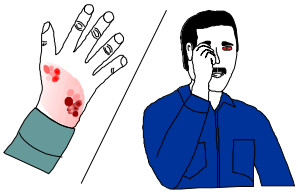
- Los pesticidas se adhieren a su piel y ropa cuando toca plantas rociadas con pesticidas, suelo, agua de riego o ha sido expuesto a deriva del rocío
- Se pueden mover desde su ropa a su piel
- Algunos pesticidas pueden atravesar su piel y pueden enfermarlo

- Avísele al jefe si está enfermo o se ha lesionado en el trabajo
- Si la enfermedad/lesión es a causa del trabajo, su empleador pagará todo el cuidado médico de esa enfermedad
- Si la enfermedad o lesión es a causa del trabajo su empleador pagará todo el tiempo que no pueda trabajar

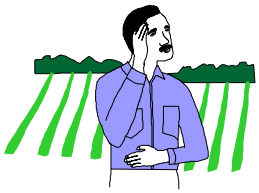
PRIMEROS AUXILIOS



- Lávese inmediatamente con agua limpia que esté más cerca, si ha sido salpicado y expuesto al rocío
- Cambiese a ropa limpia
- Después de lavarse avísele a su jefe



- Lávese si siente picazón o quemazón en los ojos o la piel
- Use bastante agua
- Avísele a su jefe que debe ir al médico



- Si siente enfermo en el trabajo (dolor de cabeza, dolor de estómago, vómito, mareo) avísele a su jefe
- El o ella se encargará de que lo lleven a un médico

- Que lo lleven al médico y nunca maneje usted si está enfermo o lesionado

Seguridad de Pesticida Información
Sección de Salud y Seguridad del Trabajador
Serie A

A-10(s) PESTICIDAS DE EXPOSICION MINIMA
En Escenarios Agrícolas

Información General:

La lista de Pesticida de Exposición Mínima (MEP) se estableció para informar a los que usan pesticidas, sobre los peligros que no estan identificados bajo el sistema de la conocida palabra señal de la etiqueta como "PELIGRO" ("DANGER"), ADVERTENCIA ("WARNING") o CUIDADO ("CAUTION"). Cada etiqueta de pesticida contiene una de estas palabras señales. El uso de palabras señales comenzó hace varios años. La Agencia de Protección Ambiental, continuó el uso de estas palabras señales cuando el Congreso de Estados Unidos le entregó la autoridad para reglamentar los pesticidas en 1972. La palabra señal da una buena idea de la capacidad del pesticida para causar enfermedad inmediata (aguda) o daño.

Estamos aprendiendo que algunos pesticidas podrían causar otras clases de efectos en la salud. Si se expone a estos pesticidas, es posible que usted no note algún efecto hasta bastante tiempo después de haber ocurrido una exposición. Algunos de estos efectos en la salud (como el cáncer) pueden ser causados por exposición a pequeñas cantidades de pesticidas por un período largo. Otros efectos (tales como los defectos de nacimiento) pueden ser causados por exposiciones a pequeñas cantidades de pesticidas en un período crítico. Las palabras señales de la etiqueta no identifica estos efectos adversos. Debido a estos problemas, se desarrolló la reglamentación de Exposición Mínima con el objeto de informar al trabajador acerca de los efectos potenciales de algunos pesticidas.

Algunas de las etiquetas bajo el MEP tendrán la palábra señal "CUIDADO" ("CAUTION"). Esto generalmente significa que el trabajador que maneja este pesticida no necesitaría ser tan cuidadoso al manejarlo. Esto no ocurre con los pesticidas bajo MEP. Uno no se enfermaría o se lesionaría, por lo menos no inmediatamente debido a exposición excesiva a pesticidas clasificados bajo la lista de MEP. Pero, la exposición podría estar causando daño en su cuerpo si esta no se maneja con cuidado.

Pesticidas de Exposicion Minima:

1. Bromoxinilo (Buctril®) - El bromoxinilo es un herbicida que se usa en malezas (zacate) de hoja ancha en los cultivos de granos, maíz, sorgo, lino, praderas, ajo y cebolla. Se ha demostrado que en los animales de experimentación causa defectos de nacimiento y efectos dañinos en animales preñados. Estos efectos pueden suceder en exposiciones de niveles muy bajos.

2. Metilo de Oxidimeton (Metasystox-R) - El metilo de oxidimeton es un insecticida y un acaricida utilizado en frutales, nogales y hortalizas. Está clasificado bajo los productos químicos que afectan una enzima que es necesaria en el funcionamiento del sistema nervioso. El envenenamiento agudo puede causar síntomas de dolores de cabeza, náuseas, vómitos, debilitamiento y visión borrosa. El metilo de oxidimeton a niveles muy bajos, causó efectos adversos en el sistema reproductivo masculino.

3. Propargita (Omite®, Comite®) - La propargita mata las arañitas en algodón, maíz, cítricos, viñas, fresas, frutales de carozo y otros cultivos. Los síntomas agudos de exposición excesiva incluyen irritación de la piel y ojos, toz e irritación de la garganta. La propargita causa toxicidad (disminución en la ganancia de peso) en los animales de experimentación preñados. También, en experimentos causa cáncer en animales de laboratorio. Este efecto puede ocurrir en humanos a niveles muy bajos de exposición

   Folpet también esta clasificado como un MEP. Sin embargo, actualmente los únicos productos registrados son las pinturas, revestimientos y calafateos. El uso de estos productos está exentos de los requisitos del MEP.

Requisitos En El Uso De MEP:

Los reglamentos de MEP se aplican sin considerar la palabra señal de la etiqueta. Además de seguir las medidas de precauciones en la etiqueta y en las reglamentaciones de California, el empleador tiene que proveer a los empleados que manejan pesticidas clasificados bajo MEP lo siguiente:

- Un lugar con toallas limpias, jabón y agua donde los trabajadores se puedan cambiar ropa y lavarse al final del día.
- Un lugar limpio y libre de pesticidas donde los trabajadores puedan guardar su ropa personal mientras manejan pesticidas.
- Toallas limpias, jabón y agua en el lugar donde se mezcla y carga pesticidas, para lavados de rutina o de emergencia.
- Overoles limpios (de una o dos piezas y que cubran el cuerpo excepto la cabeza, manos y pies); su empleador tiene que asegurar que usted comience con overoles limpios cada día de trabajo.
- Un sistema cerrado para mezclar y cargar, excepto para empleados que manejan un galón o menos por día y con los envases originales de un galón o menos.
- Ropa protectora de cuerpo entero y resistente a productos químicos, que esté limpia y que cubra la cabeza, el torso, los brazos, las manos, las piernas y los pies.
- Protección respiratoria adecuada y que esté limpia.

Excenciones Y Precauciones Adicionales:

Metil de Oxidimeton

- La aplicación a árboles y arbustos ornamentales tiene que hacerse mediante inyección al tronco o al suelo solamente.
- Se prohiben las aplicaciones dentro de un invernadero.

Propargita

- Se prohiben las aplicaciones dentro de un invernadero.

Hay algunas excenciones generales en los requisitos del MEP para la ropa protectora de cuerpo entero y cuando se usa controles de ingeniería. El cuadro siguiente explica las substituciones que se permiten.

Este folleto ayuda a los lectores a entender los reglamentos de pesticidas. No es un documento legal. La referencia legal puede encontrarse en el Código de Reglamentos de California, Artículo 3. Las palabras "tiene que" y "debe" usadas en este texto no significan lo mismo. Las palabras "tiene que" indican que la acción es obligatoria y deriva de las reglamentaciones de California. La palabra "debe" indica que se recomienda el uso de prácticas de seguridad adicionales para promover la redución a la exposición a pesticidas.

Tabla 1: Reemplazos Que Se Permiten Cuando se Usa Controles de Ingeniería

Cuando se usa lo siguiente	Los manejadores de pesticidas pueden reemplazar:*	Por lo siguiente:
Sistemas cerrados para pesticidas con la palabra "Peligro" (Danger) o "Advertencia" (Warning).	Overoles, guantes resistentes a productos químicos y delantales (mandiles) resistentes a productos químicos	PPE requerido en la etiqueta del pesticida
Sistema cerrado para pesticidas con la palabra "Cuidado" (Caution)	Ropa de trabajo	PPE requerido en la etiqueta del pesticida
Sistema cerrado bajo presión positiva	Protección para los ojos**	
Al mezclar pesticidas en envases solubles al agua	Usar en envases solubles al agua	Uso de sistema cerrado
Cabina cerrada	Ropa de trabajo y protección respiratoria necesaria	PPE requerido en la etiqueta del pesticida
Cabina cerrada aceptable a cambio de protección respiratoria	Ropa de trabajo	PPE requerido en la etiqueta del pesticida
Cualquier pesticida	Traje resistente a productos químicos	Overoles y mandil resistentes a productos químicos

*Para cualquier reemplazo, todo PPE que se requiere en la etiqueta debe estar a mano en caso de emergencia

**Además de protección a los ojos, se requiere overoles, guantes resistentes a productos químicos y mandil para pesticidas con la palabra "Peligro" (Danger) o "Advertencia" o (Warning) o además de la ropa de trabajo para pesticidas con la palabra "Cuidado" (Caution) en la etiqueta

***El uso de pesticidas en envases solubles al agua es equivalente a la mezcla bajo un sistema cerrado. Además, la transferencia desde el tanque de la mezcla al tanque de aplicación debe hacerse con un equipo de transferencia cerrado.

HS-1697(s) Revisado 20 de Septiembre de 1998
S Edmiston, R. Rutz; Traducción: A. Marín Welsh

Seguridad de Pesticida Información
Sección de Salud y Seguridad del Trabajador
Serie A

A-11(s) SUPERVISION MÉDICA

Información General:
La supervisión médica involucra el contrato de un médico con licencia para evaluar la salud ocupacional y la prevención de enfermedad. Su empleador tiene que proveer la supervisión médica, cuando un empleado maneja regularmente (mezcla, carga, o aplica, durante más de 6 días en cualquier período de 30 días) un pesticida organofosforado o carbamato de N-metilo (carbamato) y que contiene la palabra señal "PELIGRO" o "ADVERTENCIA" en la etiqueta. Los organofosforados incluyen Guthion®, diazinon, y Lursban®. Los carbamatos de N-metilo incluyen Lannate®, Temik® y Sevin®.

La colinesterasa es una enzima del cuerpo que afecta la función del sistema nervioso. Los organofosforados y carbamatos afectan la colinesterasa. La prueba de colinesterasa mide su exposición a organofosforados y carbamatos. En el lugar de trabajo, el programa de seguridad tiene que incluír el monitoreo de colinesterasa. Cuando los niveles de colinesterasa de su cuerpo bajan, su empleador tiene que:

- evaluar el lugar de trabajo
- corregir los problemas de equipo defectuoso
- corregir prácticas de trabajo incorrectas o
- sacarlo para que no siga recibiendo más exposición antes que usted se enferme clinicamente.

En la actualidad, un examen de sangre es la única práctica para obtener ésta información.

Nivel Básico:
El monitoreo de colinesterasa requiere del establecimiento de un "nivel básico" antes de una exposición. Se requiere una prueba de "nivel básico" de colinisterasa para cada empleado que mezcla, carga o aplica estos pesticidas regularmente. Sus muestras de sangre deben ser tomadas cuando usted no ha estado expuesto a organofosforados o a carbamatos, por lo menos durante 30 días.

Examenes de Colinesterasa:
En la exposición ocupacional a pesticidas la prueba de colinesterasa debe incluír tanto los glóbulos rojos (RBC), como el plasma (o suero = serum). Los dos examenes tienen significados diferentes; y el médico necesita un informe combinado para evaluar la exposición. Los carbamatos reaccionan con la enzima en forma diferente a los organofosforados. Después de una exposición a carbamatos, se necesita sacar sangre y analizar en el laboratorio rápidamente, o el médico no podrá determinar el grado de exposición o la seriedad de los problemas de seguridad en el trabajo.

Los empleados nuevos tienen que:

- ser examinados al final de los tres primeros períodos de 30 días de estar usando estos pesticidas regularmente
- después, el monitoreo periódico se reduce a cada 60 días o como recomiende el médico supervisor.

El período de 30 dias comienza el primer día de exposición. Es posible que cada período esté separado por un lapso de tiempo en que no se usen estos pesticidas. Después de los tres primeros examenes, el supervisor médico podría ajustar la frecuencia de examenes de acuerdo con los métodos de trabajo, el uso de pesticidas o el resultado de examenes anteriores.

Los métodos de laboratorio para determinar el nivel de la enzima colinesterasa varían bastante. Los resultados obtenidos con métodos diferentes no se puedan comparar facilmente. Por lo tanto, el monitoreo de colinesterasa de una persona determinada, deberá llevarse a cabo en el mismo laboratorio y usando el mismo método.

Reacción:
El cambio en la colinesterasa, podría resultar debido a otra razón y no por haber estado expuesto a

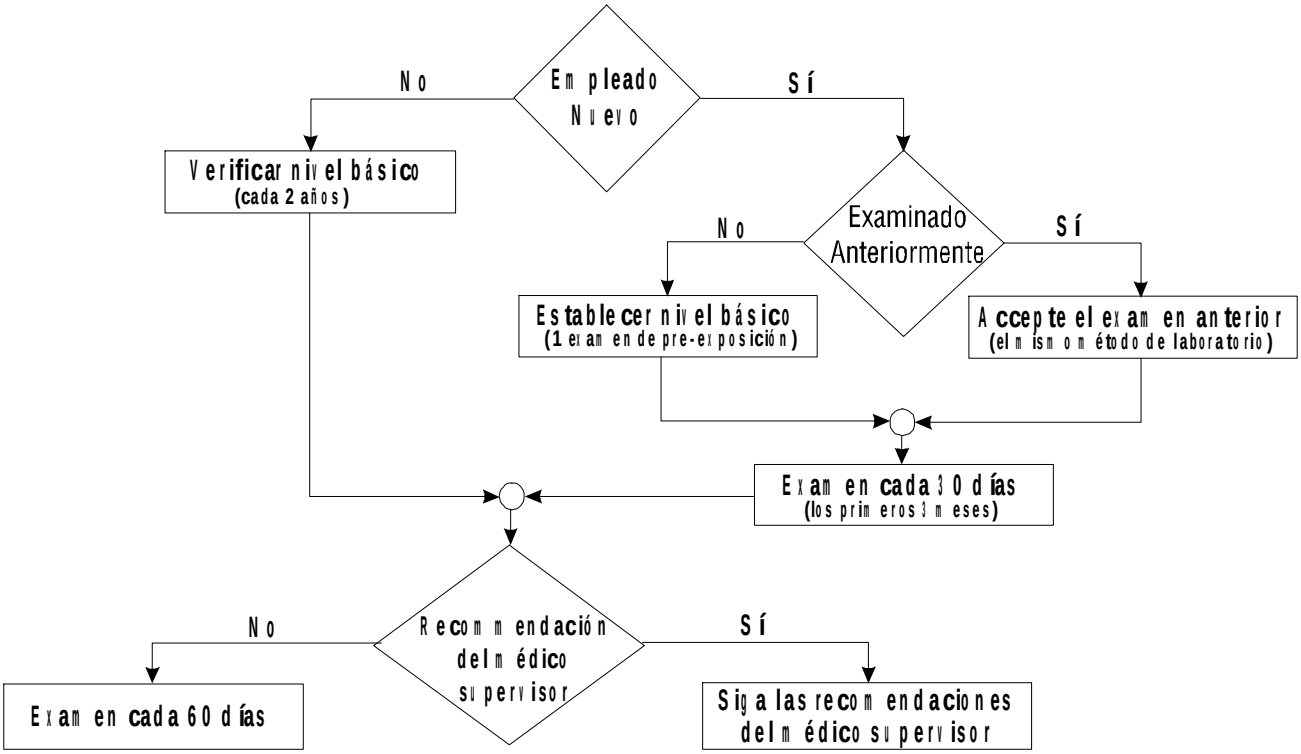
pesticidas, sin embargo, usted nunca debe asumir que ese es el caso. Siempre que su nivel de colinesterasa baje a menos del 80% del nivel básico, su empleador tiene que investigar las prácticas de trabajo, y tomar las medidas necesarias para corregir las situaciones peligrosas. Si su nivel de glóbulos rojos baja a 70% o menos del nivel básico, o si el nivel de plasma baja a 60% o menos del nivel básico, su empleador tiene que parar la exposición a organofosforados o a carbamatos. La exposición a estos pesticidas, no puede volver a continuar hasta que ambos niveles suban por lo menos al 80% de su nivel básico.

Para que los resultados de laboratorio se informen con rapidez, los médicos podrían dar indicaciones a los laboratorios para que envien por correo los resultados a su empleador y al médico al mismo tiempo. Cuando se determine su nivel básico, el médico podrá establecer niveles mínimos aceptables, tanto para el plasma como para los glóbulos rojos. De esta manera, su empleador tendrá una guía para detectar posibles problemas en forma temprana. Sin embargo, sólo los médicos con licencia deberán hacer la interpretación de los resultados de los exámenes de colinesterasa. Las otras personas que participan en éste programa de seguridad, deben comprender que ellos están únicamente siguiendo las recomendaciones del médico supervisor. Ni usted, ni su empleador, deberían asumir la responsabilidad de interpretar los resultados de los examenes y hacer diagnósticos.

Las Guías para Médicos publicadas por la Agencia de Protección Ambiental de California, Oficina de Evaluación de Peligros de la Salud contienen mayor información sobre supervisión médica.

Este folleto ayuda a los lectores a entender los reglamentos de pesticidas. No es un documento legal. La referencia legal puede encontrarse en el Código de Reglamentos de California, Artículo 3. Las palabras "tiene que" y "debe" usadas en este texto no significan lo mismo. Las palabras "tiene que" indican que la acción es obligatoria y deriva de las reglamentaciones de California. La palabra "debe" indica que se recomienda el uso de prácticas de seguridad adicionales para promover la redución a la exposición a pesticidas.

Programa de Supervisión Médica



Respuesta a Resultados de Examen de Sangre Bajos