

UC ANR Pesticide Policy 2017

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<http://ucanr.edu/sites/OPIC/>

Optional Topics (Please vote for up to 4 of them)

1. Safety Data Sheets
2. New Chlorpyrifos regulations
3. Non-fumigant VOC regulations
4. New closed mixing systems regulations
5. New PPE regulations
6. PPE for unregistered pesticides
7. Storage, transportation and disposal of pesticides
8. Pesticide container labeling
9. Pesticide recordkeeping and reporting
10. Obtaining a commercial applicator's license
11. Pesticide recommendations and publications
12. Organic pesticide research
13. Microbial pesticides
14. Soil fumigant buffer zones

Topics we will talk about

- EPA Worker Protection Standard
- EPA Applicator Certification and Training Rule
- Basics of the UC pesticide policy
- Conducting pesticide research trials
- Tolerances and crop destruct
- Groundwater protection
- Training requirements
- Supervisor responsibilities

EPA Worker Protection Standard (WPS) Changes

1. Annual training and recordkeeping for fieldworkers
2. Additional training content
3. Posting requirements
4. Application exclusion zone
5. Enclosed cab exemption for respirators
6. Minimum age requirements

EPA Worker Protection Standard (WPS) Changes

1. Annual training and recordkeeping for fieldworkers
 - Annual training for fieldworkers
 - Recordkeeping requirements **INSTEAD** of EPA blue cards



EPA Worker Protection Standard (WPS) Changes

2. Additional training content

- Number of training topics for fieldworkers increases from 11 to 24
- Number of training topics for handlers increases from 16 to 41



EPA Worker Protection Standard (WPS) Changes

3. Posting requirements

- Increases posting requirements for outdoor applications
- Modifies posting requirements for greenhouse applications



Quiz: In which of the following situations should you post a warning sign during the Restricted Entry Interval (REI)? Choose all that apply.

- When the label requires posting
- When the pesticide has a DANGER signal word
- When the REI is greater than 7 days
- When I make pesticide applications in a greenhouse
- When I make pesticide applications in a hoop house

Use **one** of these signs if:

- The pesticide was applied in a greenhouse (“completely enclosed space”), *or*
- The pesticide was applied in an enclosed space and has an REI greater than 4 hours, *or*
- Field posting is required by the label, *or*
- The REI is greater than 48 hours



Use this sign if:

- The REI is greater than 7 days



Use these signs if:

- The pesticide is a soil fumigant



Use these signs if:

- The pesticide is being applied through an irrigation system and has a DANGER signal word



or



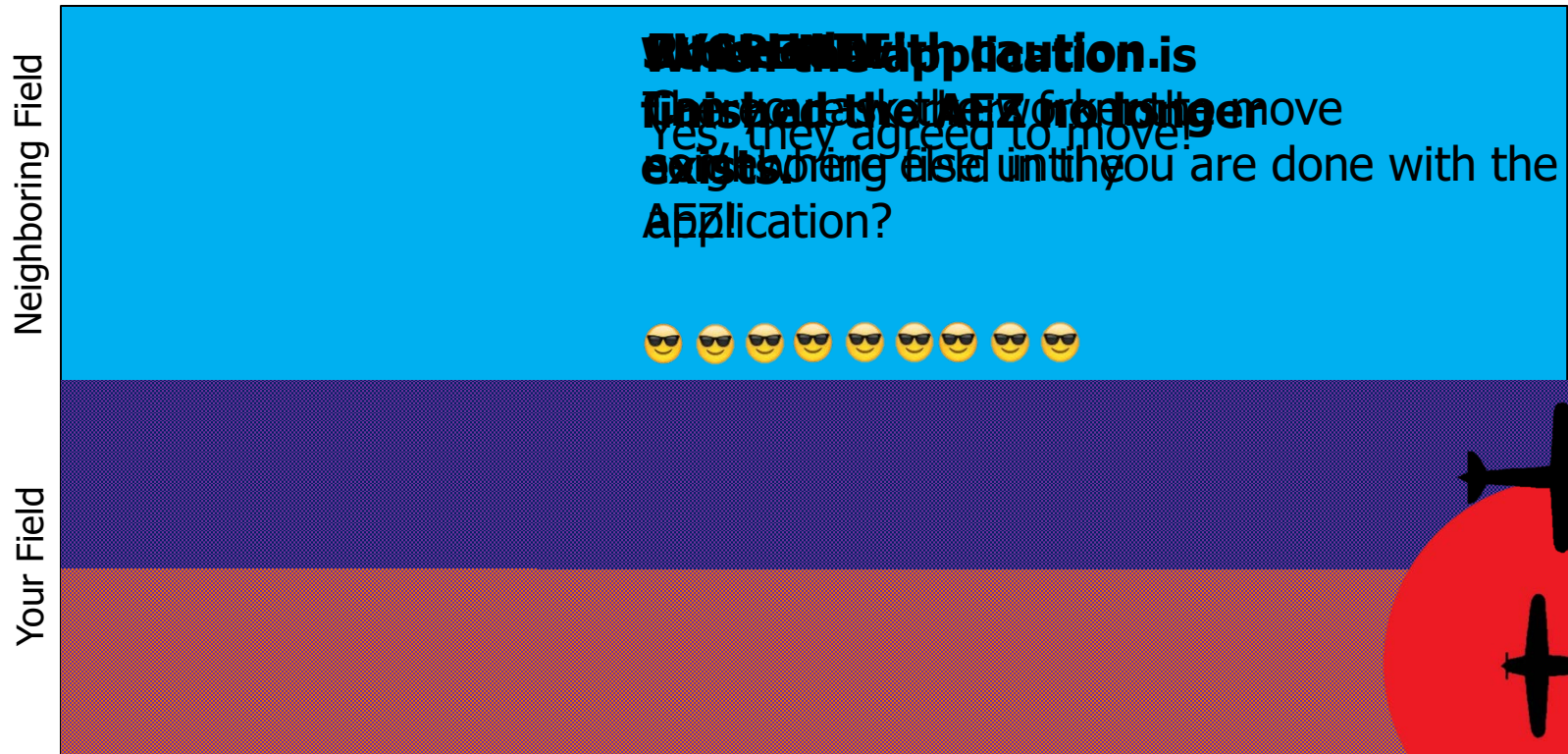
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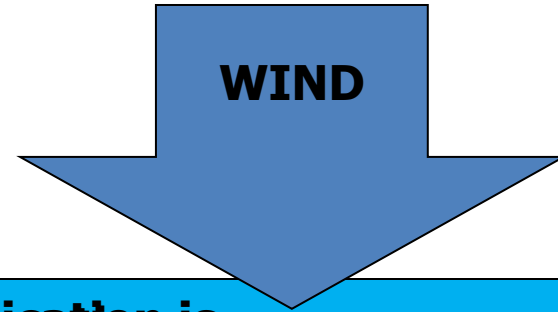
EPA Worker Protection Standard (WPS) Changes

4. Application exclusion zone (AEZ)
 - An area around pesticide application equipment that workers and other people cannot be in during a pesticide application
 - Up to 100 feet in any direction from the application equipment
 - Size depends on droplet size and height of nozzles

AEZs on Field Borders



AEZs on Field Borders

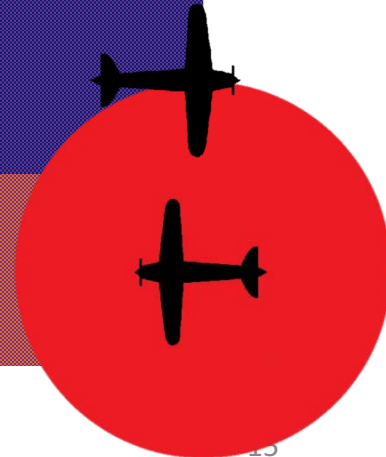


Neighboring Field

When application is
Yes, the wind is blowing away from the workers and I can't be
ensure that my application will not contact the workers in the
other field.



Your Field



EPA Worker Protection Standard (WPS) Changes

5. Enclosed cab exemption for respirators

EPA Worker Protection Standard (WPS) Changes

5. Minimum age requirements:
 - Fieldworkers – none
 - Early entry employees – 18
 - Pesticide handlers - 18

EPA Applicator Certification and Training Rule – Final

- Effective date delayed until May 22, 2017
- 3-5 years for implementation

EPA Applicator Certification and Training Rule – Final

- Category-specific continuing education (CE) requirements – **REMOVED FROM FINAL RULE**
- Method-specific categories (e.g., soil fumigation, non-soil fumigation, aerial) will require site-specific categories – **REMOVED FROM FINAL RULE**

EPA Applicator Certification and Training Rule – Final







- Enhanced Private Applicator Competency Standard
- Require additional categories (Private and Commercial Applicators)
 - Soil Fumigation
 - Non-soil fumigation
 - Aerial application
- Verify the identity of CE participants

EPA Applicator Certification and Training Rule – Final

- Supervising applicators must:
 - Be certified in the category in which they supervise applications
 - Ensure a means for **immediate communication** between supervisor and supervisee
- Minimum age for applicators of restricted materials (private and commercial): 18

CALIFORNIA REGULATORY UPDATE

Safety Data Sheets

<p>Health Hazard</p>  <ul style="list-style-type: none"> ■ Carcinogen ■ Mutagenicity ■ Reproductive Toxicity ■ Respiratory Sensitizer ■ Target Organ Toxicity ■ Aspiration Toxicity 	<p>Flame</p>  <ul style="list-style-type: none"> ■ Flammables ■ Pyrophorics ■ Self-heating ■ Emits Flammable Gas ■ Self-reactive ■ Organic Peroxides 	<p>Exclamation Mark</p>  <ul style="list-style-type: none"> ■ Irritant (skin and eye) ■ Skin Sensitizer ■ Acute Toxicity ■ Narcotic Effects ■ Respiratory Tract Irritant ■ Hazardous to Ozone Layer (Nonmandatory)
<p>Gas Cylinder</p>  <ul style="list-style-type: none"> ■ Gases Under Pressure 	<p>Corrosion</p>  <ul style="list-style-type: none"> ■ Skin Corrosion/Burns ■ Eye Damage ■ Corrosive to Metals 	<p>Exploding Bomb</p>  <ul style="list-style-type: none"> ■ Explosives ■ Self-reactives ■ Organic Peroxides
<p>Flame Over Circle</p>  <ul style="list-style-type: none"> ■ Oxidizers 	<p>Environment (Non-mandatory)</p>  <ul style="list-style-type: none"> ■ Aquatic Toxicity 	<p>Skull and Crossbones</p>  <ul style="list-style-type: none"> ■ Acute Toxicity (Fatal or Toxic)

Safety Data Sheets

1. Identification.
2. Hazards Identification.
3. Composition/ information on ingredients.
4. First-aid measures.
5. Fire-fighting measures.
6. Accidental release measures.
7. Handling and storage.
8. Exposure controls/personal protection.
9. Physical and chemical properties.
10. Stability and reactivity.
11. Toxicological information.
12. Ecological information (Non-mandatory).
13. Disposal considerations (Non-mandatory).
14. Transport information (Non-mandatory).
15. Regulatory information (Non-mandatory).
16. Other information.

Signal Words Used on SDSs

- “Warning” for less severe hazard categories
- “Danger” for more severe hazard categories



Signal Words Used on Labels

TOXICITY CATEGORY (Signal Word)³

	High Toxicity (DANGER/Danger-Poison) Category I	Moderate Toxicity (WARNING) Category II	Low Toxicity (CAUTION) Category III	Very Low Toxicity (Optional Signal Word = CAUTION) Category IV
Acute Oral LD ₅₀	Up to and including 50 mg/kg (≤ 50 mg/kg)	Greater than 50 through 500 mg/kg (> 50 – 500 mg/kg)	Greater than 500 through 5000 mg/kg (> 500 – 5000 mg/kg)	Greater than 5000 mg/kg (> 5000 mg/kg)
Inhalation LC ₅₀	Up to and including 0.05 mg/L (≤ 0.05 mg/L)	Greater than 0.05 through 0.5 mg/L (>0.05 – 0.5 mg/L)	Greater than 0.5 through 2.0 mg/L (> 0.5 – 2.0 mg/L)	Greater than 2.0 mg/L (> 2.0 mg/L)
Dermal LD ₅₀	Up to and including 200 mg/kg (≤ 200 mg/kg)	Greater than 200 through 2000 mg/kg (> 200 - 2000 mg/kg)	Greater than 2000 through 5000 mg/kg (>2000 – 5000 mg/kg)	Greater than 5000 mg/kg (> 5000 mg/kg)
Primary Eye Irritation	Corrosive (irreversible destruction of ocular tissue) or corneal involvement or irritation persisting for more than 21 days	Corneal involvement or other eye irritation clearing in 8 – 21 days	Corneal involvement or other eye irritation clearing in 7 days or less	Minimal effects clearing in less than 24 hours
Primary Skin Irritation	Corrosive (tissue destruction into the dermis and/or scarring)	Severe irritation at 72 hours (severe erythema or edema)	Moderate irritation at 72 hours (moderate erythema)	Mild or slight irritation at 72 hours (no irritation or erythema)

Section 1: Identification

Product identifier

Product Name • GHS Format Example SDS

Product Code • 123456

Relevant identified uses of the substance or mixture and uses advised against

Recommended use • Hazard Communication & Compliance

Details of the supplier of the safety data sheet

Manufacturer • SiteHawk
709 Nissan Drive
Smyrna, TN 37167
United States
www.sitehawk.com
support@sitehawk.com

Telephone (General) • 615-459-0064

Emergency telephone number

Manufacturer • 800-424-9300 - CHEMTREC

Section 2: Hazard Identification

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012 • Flammable Liquids 2 - H225
Skin Irritation 2 - H315
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336

Label elements

OSHA HCS 2012

DANGER

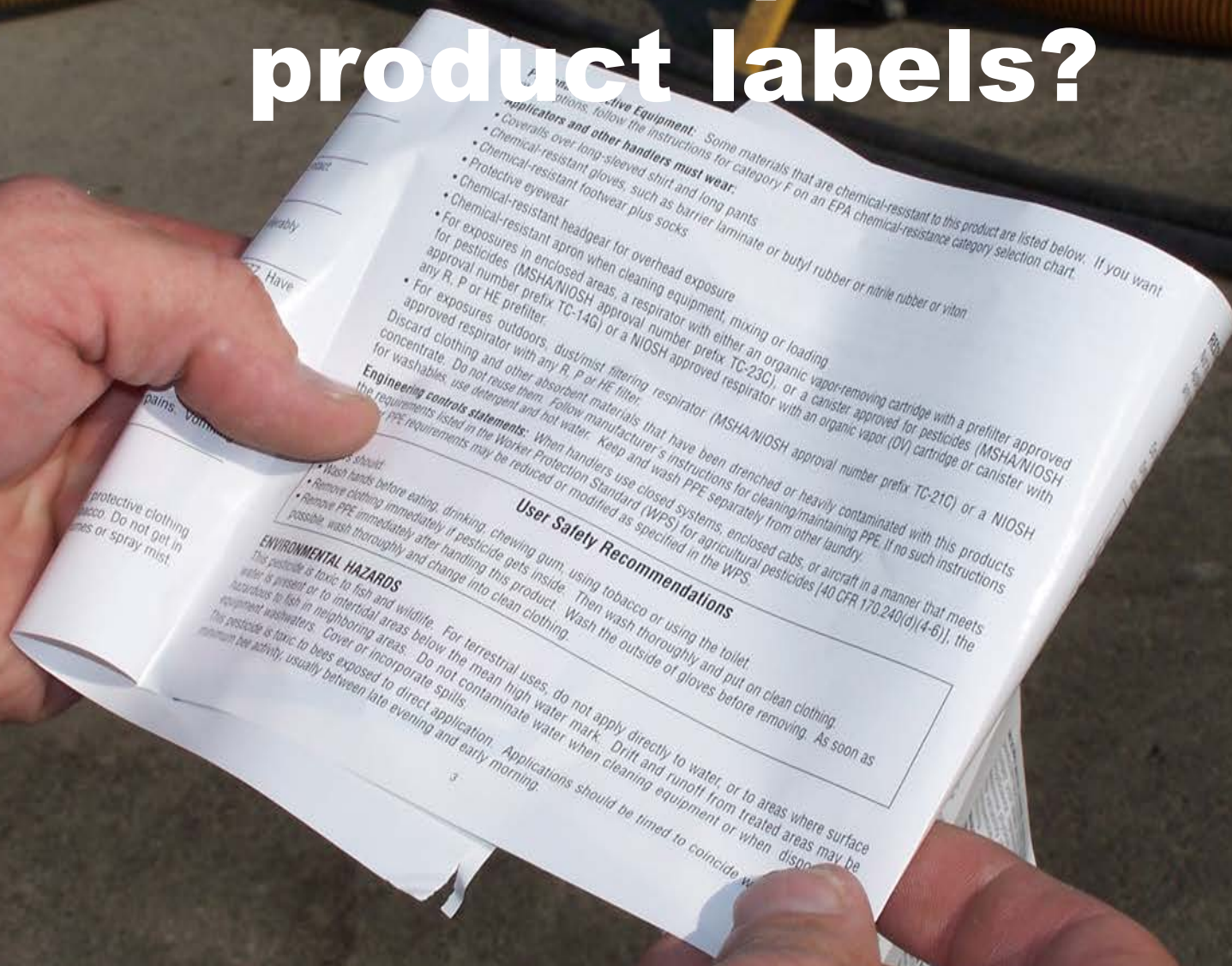


Hazard statements

• Highly flammable liquid and vapour - H225
Causes skin irritation - H315
May cause drowsiness or dizziness - H336

Precautionary statements

What about pesticide product labels?



Applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or viton
- Protective eyewear
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

For exposures in enclosed areas, a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE prefilter.

For exposures outdoors, dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) or a NIOSH approved respirator with any R, P or HE filter.

Engineering controls statements: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish in neighboring areas. Do not contaminate water when cleaning equipment or when disposing of equipment washwaters. Cover or incorporate spills.

This pesticide is toxic to bees exposed to direct application. Applications should be timed to coincide with minimum bee activity, usually between late evening and early morning.

FIFRA pesticide labels

- US EPA's FIFRA pesticide product labels are currently not subject to the GHS
- To date, EPA/OPP has not incorporated the GHS into the FIFRA pesticide classification and labeling regulations
- Pesticide registrants do not have to update their FIFRA labels to accommodate the GHS

Signal Words May not Match



PULL HERE TO OPEN

 **Daconil WeatherStik®**
Flowable fungicide

syngenta.

Flowable Fungicide

For control of turf and ornamental diseases
For control of diseases of apricot, cherry (sweet and tart),
nectarine, peach, plum and prune trees

Active Ingredient:
Chlorothalonil (tetrachloroisophthalonitrile) 54.0%
Other Ingredients: 46.0%
Total: 100.0%

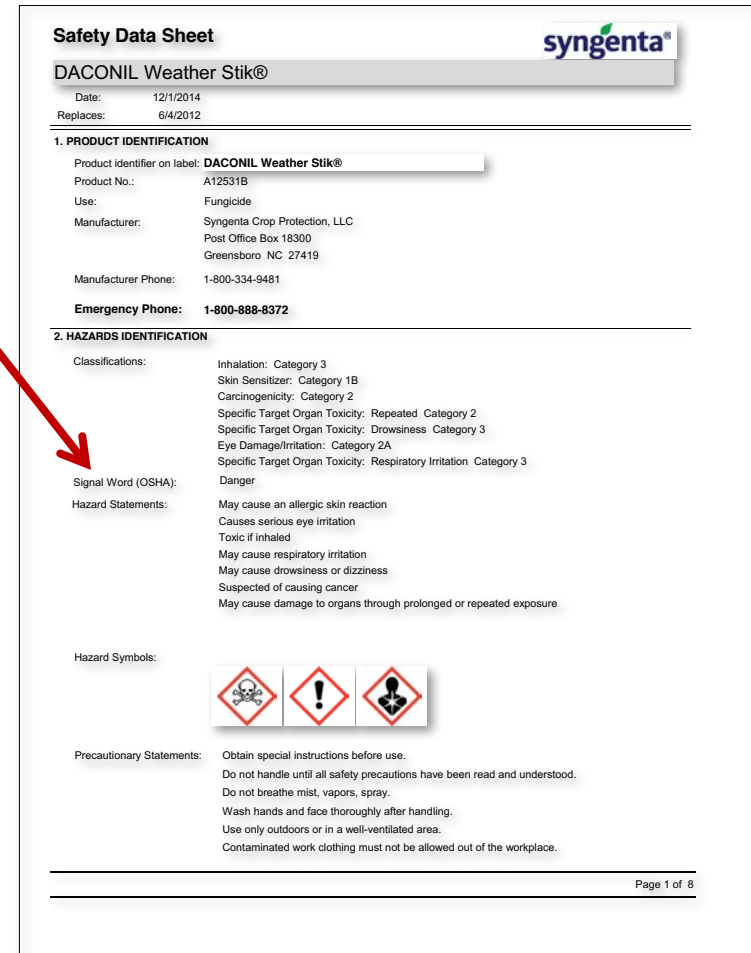
Contains 6.0 pounds chlorothalonil per gallon (720 grams per liter)


**KEEP OUT OF REACH OF CHILDREN.
CAUTION**

See additional precautionary statements and directions for use
inside booklet.

EPA Reg. No. 50534-209-100
EPA Est. 50534-TX-001
SCP 50534-209A-L1G 0712
4014216

2.5 gallons
Net Contents



Safety Data Sheet 

DACONIL WeatherStik®

Date: 12/1/2014
Replaces: 6/4/2012

1. PRODUCT IDENTIFICATION

Product identifier on label: **DACONIL WeatherStik®**


Product No.: A12531B
Use: Fungicide
Manufacturer: Syngenta Crop Protection, LLC
Post Office Box 18300
Greensboro NC 27419
Manufacturer Phone: 1-800-334-9481
Emergency Phone: **1-800-888-8372**

2. HAZARDS IDENTIFICATION

Classifications: Inhalation: Category 3
Skin Sensitizer: Category 1B
Carcinogenicity: Category 2
Specific Target Organ Toxicity: Repeated: Category 2
Specific Target Organ Toxicity: Drowsiness: Category 3
Eye Damage/Irritation: Category 2A
Specific Target Organ Toxicity: Respiratory Irritation: Category 3

Signal Word (OSHA): **Danger**

Hazard Statements: May cause an allergic skin reaction
Causes serious eye irritation
Toxic if inhaled
May cause respiratory irritation
May cause drowsiness or dizziness
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure

Hazard Symbols: 

Precautionary Statements: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe the mist, vapors, spray.
Wash hands and face thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.

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SDS Section 15. Regulatory Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Harmful if swallowed

Causes moderate eye injury

Avoid contact with eyes or clothing

This pesticide is toxic to aquatic invertebrates

What are pesticide users required to do?

- Continue to follow product labels and laws and regulations
- Continue to comply with OSHA requirements for hazard communication
- When pesticide suppliers replace MSDS with SDS, employers need to obtain and maintain new SDS for pesticides they use

New Chlorpyrifos Regulations

- Effective July 1, 2015
- All chlorpyrifos-containing products state restricted materials
- Agricultural commodities only
- Based on monitoring data and pesticide illness reporting



Non-Fumigant VOC Regulations

- Use restrictions apply to:
 - High VOC formulations of Abamectin, chlorpyrifos, gibberellins, oxyfluorfen
 - Applied in the San Joaquin Valley
 - Applied between May 1 and October 31
 - Applied to Alfalfa, almonds, citrus, cotton, grapes, pistachios, walnuts
- Use restrictions apply only if emissions are above trigger level in the previous summer

Non-Fumigant VOC Regulations

“Prohibitions on the use of high-VOC products for abamectin, chlorpyrifos, gibberellins, and oxyfluorfen on certain crops in the San Joaquin Valley went into place May 1 through October 31, 2015 and the prohibitions will remain in effect for the May 1, 2017 through October 31, 2017 period.”

Non-Fumigant VOC Regulations

The screenshot shows a web browser window with the URL www.cdpr.ca.gov/docs/dept/listserv/listdesc.htm. The page header includes the California Department of Pesticide Regulation logo and navigation links: HOME, PROGRAMS, DATABASES, NEWS/PUBLICATIONS, and QUICK LINKS. A search bar is also present.

Electronic Mailing List Subscriptions

Welcome to the subscription page for our electronic mailing lists. Anyone with e-mail capability can sign up for free, automatic delivery of news releases, regulatory notices, program updates, and other postings to our Web site. By subscribing, you will receive periodic e-mail notices when new information has been posted to your area of interest. Often the message will contain a link to our site where you can download the relevant documents at your convenience.

To subscribe or unsubscribe to our e-mail lists, follow the directions below. You will receive notification that you have been added or removed from the list within 24 hours.

List name	To subscribe to a list.	To UNsubscribe to a list.
Air Monitoring Network , updates and announcements on DPR's network to sample ambient air for multiple pesticides in several communities on a regular schedule, over several years.	1. Click on Subscribe link.. 2. Follow instructions on Subscribe page.	1. Click on UNsubscribe . 2. Follow instructions on UNsubscribe page.
Endangered Species Information , includes U.S. EPA Interim Measures Bulletins and other pesticide-related endangered species information.	Subscribe	UNsubscribe
Environmental Justice , information, developments and proposal for comment on DPR's Environmental Justice	Subscribe	UNsubscribe

Use restrictions are announced via the DPR VOC email list

Non-Fumigant VOC Regulations

Growers must obtain a written recommendation from a licensed PCA to use these products if VOC emissions are above the trigger level.



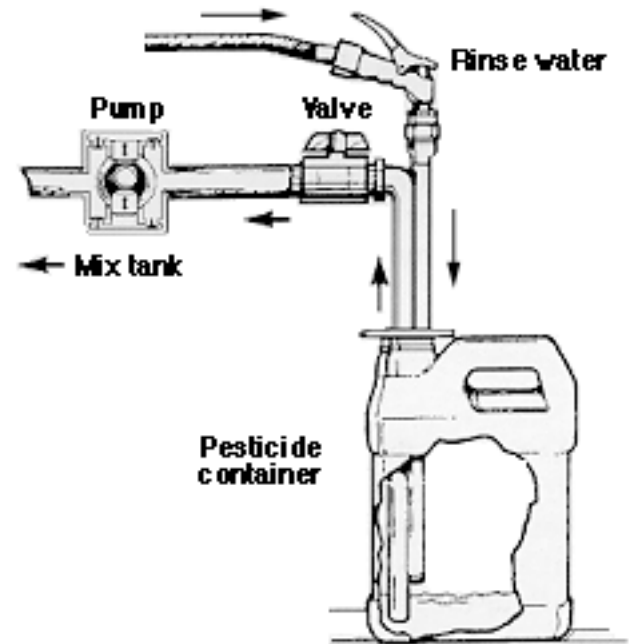
New Closed Systems Regulations

- Effective January 1, 2016
- Proposed Section 6746:
 - Does **NOT APPLY** only to Category I (“DANGER”) pesticides
 - Divides pesticides into two Tiers, based on “Human Hazard and Precautionary Statements” found on the label

New Closed Systems Regulations

Tier 1:

- “Fatal if absorbed through skin”
- Closed mixing system must rinse and drain container
- Includes spray adjuvants
- Uses of 1 gallon or less NOT exempt



New Closed Systems Regulations

Tier 2:

- “May be fatal if absorbed through skin,” or “Corrosive, causes skin damage”
- Excludes spray adjuvants
- Uses of 1 gallon or less exempt

New Closed Systems Regulations



New PPE Regulations

- Effective July 1, 2015
- Coverall section (6736) moved to PPE Section (6738)
- Other, similar reorganizations
- Cotton glove liners allowed



New PPE Regulations

- More explicit information about glove selection and thickness

Glove Category Selection Key

Label Code	Material Recommended by CDPR	Material Code
A	1,2,3,4,5,6,7,8	1: Laminate
B	1,2	2: Butyl
C	1,2,3,4,7,8	3: Nitrile
D	1,2	4: Neoprene
E	1,3,4,8	5: Natural
F	1,2,3,8	6: Polyethylene
G	1,8	7: PVC
H	1,8	8: Viton

All but Laminate and Polyethylene must be 14 mils or thicker

UC ANR PESTICIDE POLICY

Rights and Responsibilities

- Research rights
 - Researchers *granted* the right to conduct hazardous chemical research on UC and cooperators' property.
- Research responsibilities
 - To do no harm
 - To conduct intellectually honest research



Pest Management Chemical Experiments Create Risks and Potential Liabilities

- Risks
 - To Cooperators
 - To the Public
 - To Consumers
 - To the University
 - Reputation
 - Research Rights
- Liabilities
 - Individual Researcher
 - County, DANR and UC



Policy on Pesticides and Related Chemicals: Use and Experimentation

ANR Administrative Handbook Section 281

All research, published pest management guidelines and recommendations relating to pesticide use are to be conducted in accordance with all applicable laws and regulations and this policy.

Scope of ANR Pesticide Policy

- ANR employees who use pesticides for experimental purposes
- Pesticides or related substances in any field test or field demonstration.



Scope of ANR Pesticide Policy

- Campus
- Field Stations
- Research and Extension Centers
- Cooperator's land



Scope of ANR Pesticide Policy

- Does not include greenhouses or laboratories





Definitions

- Pesticide:
 - Any chemical or biotic agent used or intended for use for pest control.
 - Pesticide includes any substance, or mixture of substances which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest which may infest or be detrimental to vegetation, humans, animals, or households, or be present in any agricultural or nonagricultural environment whatsoever.
 - Any chemical or microbial agent that is being used with the intent of testing in any field test.

Some Materials that are Pesticides

- Disinfectants
 - Clorox
 - Chemicals to sterilize benches or countertops
- Algaecides
- Animal repellents
- Pheromones

- All must be registered and the site listed for legal use



Intent of Use

- A pesticide can be any substance used to control a pest whether or not it is registered as a pesticide.
- If that substance is not labeled for the use or lacks an exemption it would be illegal to use it for pest control
- Exceptions
 - Home remedies used by the homeowner for non-agricultural sites
 - Substances such as steam for weed control



CONDUCTING PESTICIDE RESEARCH TRIALS

Conducting Pesticide Research Trials – Pop Quiz

- Do you need a Research Authorization?
- Do you need an Experimental Use Permit (EUP)?
- Do you need a Restricted Materials Permit?
- Do you have to report pesticide use (PUR)?

Exemption of UC from Obtaining Research Authorization

- Title 3, California Code of Regulations (CCR), Section 6268, Research Authorization
 - University employees are exempt, providing UC has a policy covering experimental use.

State of California Department of Pesticide Regulation Pesticide Registration Branch		Pesticide Research Authorization		DPR Use Only	
Researcher				Telephone No.	
Firm Name					
Address					
City, State, Zip				Type or print this information for use as a mailing label.	
Pesticide		Maximum Rate of A.I. (per acre or other units)	U.S. EPA Registration No. (if any)		
1.					
2.					
3.					
4.					
Type of Pesticide	<input type="checkbox"/> Insecticide/Acaricide	<input type="checkbox"/> Herbicide	<input type="checkbox"/> Disinsect/Defoliant	<input type="checkbox"/> Nematicide	<input type="checkbox"/> Rodenticide
	<input type="checkbox"/> Space Adjunct	<input type="checkbox"/> Fungicide	<input type="checkbox"/> Plant Growth Regulator	<input type="checkbox"/> Other	
Commodity or Site to be Treated		Size of each Trial	Number of Trials	Total Area	
1.					
2.			Method of Application	<input type="checkbox"/> Aerial <input type="checkbox"/> Handheld <input type="checkbox"/> Multiple Applications? <input type="checkbox"/> Yes <input type="checkbox"/> No	
3.			Type of Data Sought		
4.			Disposition of Treated Commodity (See instructions if not crop destroy)		
5.					
Stages of Growth:	<input type="checkbox"/> Preplant	<input type="checkbox"/> Growing Season (All Stages)	Starting Date (first application)	Last Application Date	Trial Completion (crop harvest/destroy)
	<input type="checkbox"/> Post Harvest	<input type="checkbox"/> Dormant	<input type="checkbox"/> Other		
Signature of Responsible Researcher	Title			Date	
DPR Use Only - Below This Line					
Conditions: This authorization is approved for use statewide and expires on the completion date shown above unless otherwise specified.					
A <input type="checkbox"/> Treated commodity may be harvested.					
B <input type="checkbox"/> Non-Crop - No harvestable food/feed crop is involved.					
C <input type="checkbox"/> Treated commodity must be destroyed or used for research purposes only.					
D <input type="checkbox"/> Other:					
Approval				Date	

Restricted Materials Permit

- Required of UC employees when possessing, using, or applying any restricted material for pest control purposes.
- No permit is required for restricted materials used only for experimental or research purposes, when possessed or used by or under the supervision of research personnel from UC.



Experimental Pesticide Use

- Application is made for research purposes only.
- No commercial pest control benefit is intended or expected.
- Applications must conform to State and Federal guidelines.



Definitions

- Experimental Pesticide:
 - New formulations of existing products.
 - New products containing old active ingredients.
 - Applications to any crop or site not on the California-registered label
 - No California label exists
 - Use of any spray adjuvant not registered in California.
 - Use in conflict with the CA registered label.

Use in Conflict with the Label

- Examples?

Use in Conflict with Label

- Does not include:
 - Applications at lower than label rates.
 - Less frequent application intervals.
 - Tank mixes (unless specifically prohibited on the label).
 - Use against pests not listed or prohibited on the label.
 - Increasing the concentration of the mixture, if published in a UC Pest Management Guideline
 - Cannot increase the amount of a.i. applied per acre
 - ***Providing all other label directions are followed.***



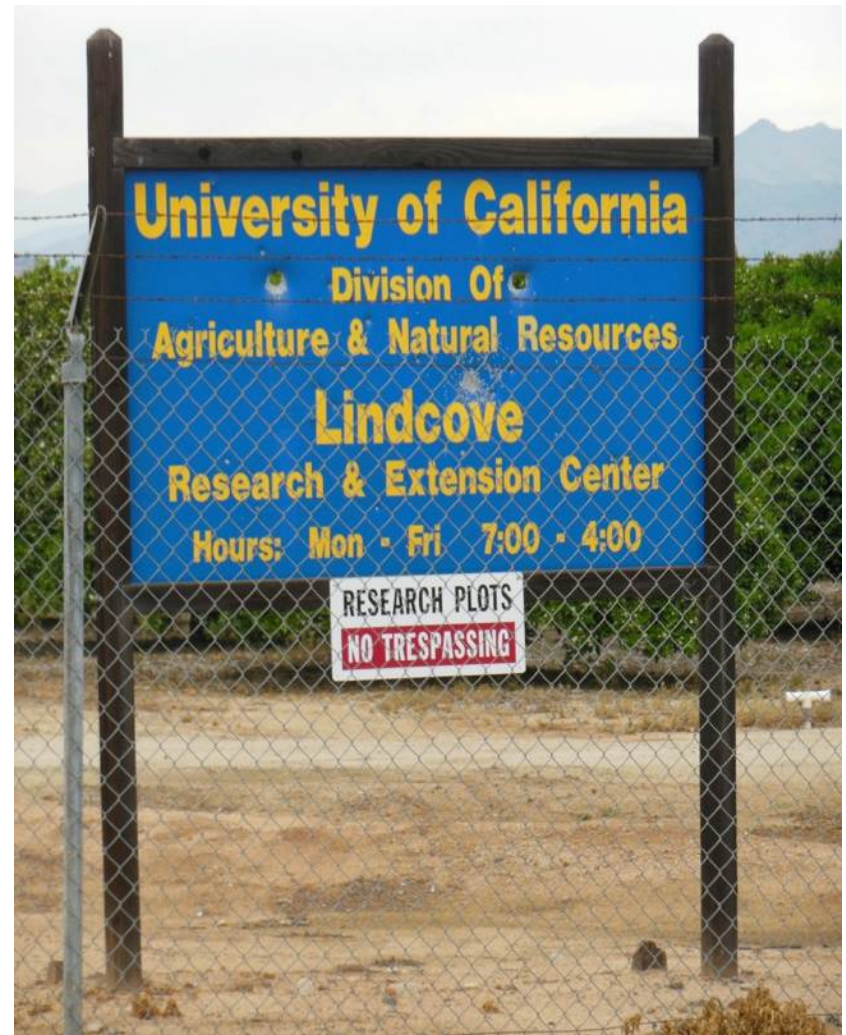
Pesticide Research and Pesticides used for Experimentation

- Research using pest control chemicals can consist of either experimental pesticide applications or applications made strictly in accordance with CA registered labels, or both.
- Experimental applications must conform with this policy



University Property

- Land owned or controlled by the UC and includes only property over which the UC maintains day-to-day control



Non-UC Property

- Property under the day-to-day control of individuals and institutions other than the University of California (i.e., private land).



Is there anything you have to do differently when you are making experimental pesticide applications OFF University property?

Requirements for Trials Conducted off UC Property



- At least 24 hours prior to commencement of any experimental pesticide trial on property not owned or controlled by the UC, the supervisor shall submit to the county agricultural commissioner and grower a copy of an Appendix I
- This serves as the equivalent of a Notice of Intended Application (NOI)

Noncompliance

- Will result in the loss of the exemption provided under Title 3 CCR, Section 6268.
- May be deemed a violation of Section 6260.
 - Authorization for Research

Research Authorizations

- DPR changed Research Authorization Regulations January 1, 2016 (3CCR 6264)
- Does not directly affect UC research



Do you conduct experimental
pesticide research off University
property?

TOLERANCES AND CROP DESTRUCT

A tolerance is the maximum pesticide residue that can be on a commodity at the time _____.

- A. of the last application
- B. it leaves country
- C. of harvest

A Tolerance is the maximum pesticide residue level that can legally remain on a commodity at the time of harvest



Tolerance

The screenshot shows the eCFR website interface. The main content area displays the following information:

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR Data is current as of January 22, 2014

Title 40: Protection of Environment
PART 180—TOLERANCES AND EXEMPTIONS FOR PESTICIDE CHEMICAL RESIDUES IN FOOD
Subpart G—Specific Tolerances

§180.507 Azoxystrobin; tolerances for residues.

(a) General. (1) Tolerances are established for residues of the fungicide, azoxystrobin, including its metabolites and degradates, in or on the commodities in the following table. Compliance with the tolerance levels specified in the table is to be determined by measuring only the sum of azoxystrobin, [methyl(Z)-2-(2-(6-(2-cyanophenoxy)pyrimidin-4-yloxy)phenyl)-3-methoxyacrylate], and the Z-isomer of azoxystrobin [methyl(Z)-2-(2-(6-(2-cyanophenoxy)pyrimidin-4-yloxy)phenyl)-3-methoxyacrylate) in or on the commodity.

Commodity	Parts per million
Acerola	2.0
Almond, hulls	4.0
Animal feed, nongrass, group 18, forage	45
Animal feed, nongrass, group 18, hay	120
Artichoke, globe	4.0
Asparagus	0.04
Atamoya	2.0
Avocado	2.0
Banana	+
Barley, bran	6.0
Barley, forage	25
Barley, grain	3.0
Barley, hay	10.0
Barley, straw	15.0
Berry, low growing, subgroup 13-07G, except cranberry	10.0
Biriba	2.0
Brassica, head and stem, subgroup 5A	3.0
Brassica, leafy greens, subgroup 5B	25
Bushberry subgroup 13-07B	5.0
Caneberry subgroup 13-07A	5.0
Canistel	2.0
Cherimoya	2.0
Culantro, leaves	30.0
Citrus, dried pulp	20.0
Citrus, oil	40.0
Corn, field, forage	12.0
Corn, field, grain	0.05
Corn, field, refined oil	0.3
Corn, field, stover	25.0
Corn, pop, grain	0.05
Corn, pop, stover	25.0
Corn, sweet, forage	12.0

[Title 40 Code of Federal Regulations, Part 180](#)

Crop Control, Disposition, and Destruct Notification Requirements

- Commodities treated with any experimental pesticide for which there is no pesticide residue tolerance or tolerance exemption cannot enter the channels of trade or in any way be made available for use as a human or animal food or feed.
- Supervisor has primary responsibility to ensure that the treated commodity is posted and destroyed.



Destroyed

- Destroyed means rendered unfit for utilization as human or animal feed.



Photo: Dan Marcum

Remaining Plant Parts

- All parts of the treated commodity potentially suitable for use as human or animal food or feed and not removed from the site for research purposes shall be destroyed.



Posting Requirements

- Prior to application, a sign shall be posted at each corner of the experimental plot with the words, “Commodity treated with experimental pesticide, do not harvest.” The signs shall be in English and Spanish, and of a size so the wording is readable to a person with normal vision, from a distance of 25 feet. Signs will remain in place until treated crop is destroyed.



Photo: Bennie Fouche

**COMMODITY TREATED
WITH EXPERIMENTAL
PESTICIDE,
DO NOT HARVEST.**



**ESTE CULTIVO FUE
TRATADO CON
PESTICIDA
EXPERIMENTAL,
NO COSECHAR.**



Reporting Crop Destruct

- Some CACs require a 24 hour notice of crop destruct for trials off UC property.
- Best to check with CAC when submitting Appendix I to determine if they want a crop destruct notice, too.
- It is helpful to submit a detailed map of the crop destruct site.

ENF 07-08

- DPR issued an enforcement letter to CACs clarifying crop destruct requirements, particularly as they relate to UC research.
- <http://www.cdpr.ca.gov/docs/county/cacltrs/penfltrs/penf2007/2007008.htm>

What Happens if Treated Commodity is Potentially Made Available for Human or Animal Consumption?

- Persons conducting the research shall IMMEDIATELY notify:
 - CAC
 - Grower
 - DPR
 - UC ANR
 - Department Chair (CE Specialists and AES faculty)
 - County Director (Farm Advisors)

Violations of UC Crop Destruct Policy

- Experimental plots harvested and marketed
 - Peaches Reliable source; no direct costs
 - Kiwi Fruits Reliable source; no direct costs
 - Pumpkins Documented; minor direct costs
 - Cherries Documented; no direct costs
 - Tomatoes Documented; Quietly settled
- No known violations for over 15 years!!!



Registered Uses



- Food or feed treated with pesticides registered for application on the test site and applied at or below the registered label rates may be harvested and allowed to enter the food marketing chain, provided all other label and State regulatory conditions are met.

Federally, but Not CA Registered Pesticides

- If product has federal registration and tolerance, may be used experimentally in CA without crop destruct.



Pesticides Applied above Label Rates

- Experimental applications may include those above the label rate
- The tolerance must not be exceeded at the time of harvest
- Laboratory analysis may be required to assure the researcher and grower
- The pesticide use report can be for the site or “research commodity”

Tolerance



- Maximum Residue Levels (MRLs) are the international equivalent of tolerances
<https://www.globalmrl.com/>
- US tolerances and MRLs may not be equivalent.

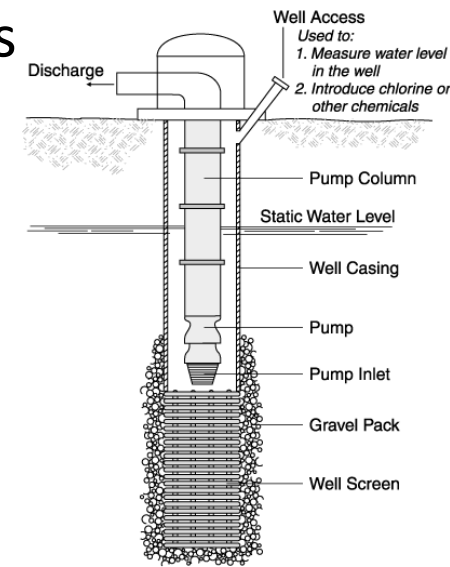
When do you need to worry about whether or not you have exceeded the MRL?

- A. When I am working with an export commodity
- B. When I am preparing for an inspection
- C. I do not need to worry about the MRL

GROUNDWATER PROTECTION

Potential Groundwater Contaminating Chemicals

- Listed in 3 CCR Section 6800(a)
- May be applied by UC for research and experimental purposes only pursuant to a valid research authorization. The UC research exemption from the requirement for a Research Authorization does not apply when these potentially groundwater polluting chemicals are used for research and experimentation purposes





6800 (a) List

- Atrazine
- Simazine
- Bromacil
- Diuron
- Prometon
- Bentazon
- Norflurazon

See EH 03-05 for list of areas affected:

<http://www.cdpr.ca.gov/docs/emon/grndwtr/eh0305update.pdf>

Groundwater Protection Areas

www.cdpr.ca.gov/docs/emon/grndwtr/gwpa_locations.htm

Most Visited Getting Started

CA.GOV California Department of Pesticide Regulation

Skip to: [Content](#) | [Footer](#) | [Accessibility](#) | [A-Z Index](#)

Search GO
 DPR California

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Air Ground water Surface water Food safety Exotic pests Special projects Pesticide use report

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- [Programs & Services](#)
- [Progress Report](#)

Locations of Ground Water Protection Areas

[Back to Identifying and Protecting Ground Water Protection Areas](#)

A ground water protection area (GWPA) is a one-square mile section of land that is sensitive to the movement of pesticides. GWPAs can be established if any of the following are true:

- previous detections of pesticides in that section
- contains coarse soils and depth to ground water < 70 feet
- contains runoff-prone soils/hardpans and depth to ground water < 70 feet

Pesticide use is restricted in GWPAs; regulations and management practices differ depending on whether the GWPA is a leaching or runoff area. For more information on GWPA regulations and guidance, please see: [Pesticide use regulations to protect ground water](#)

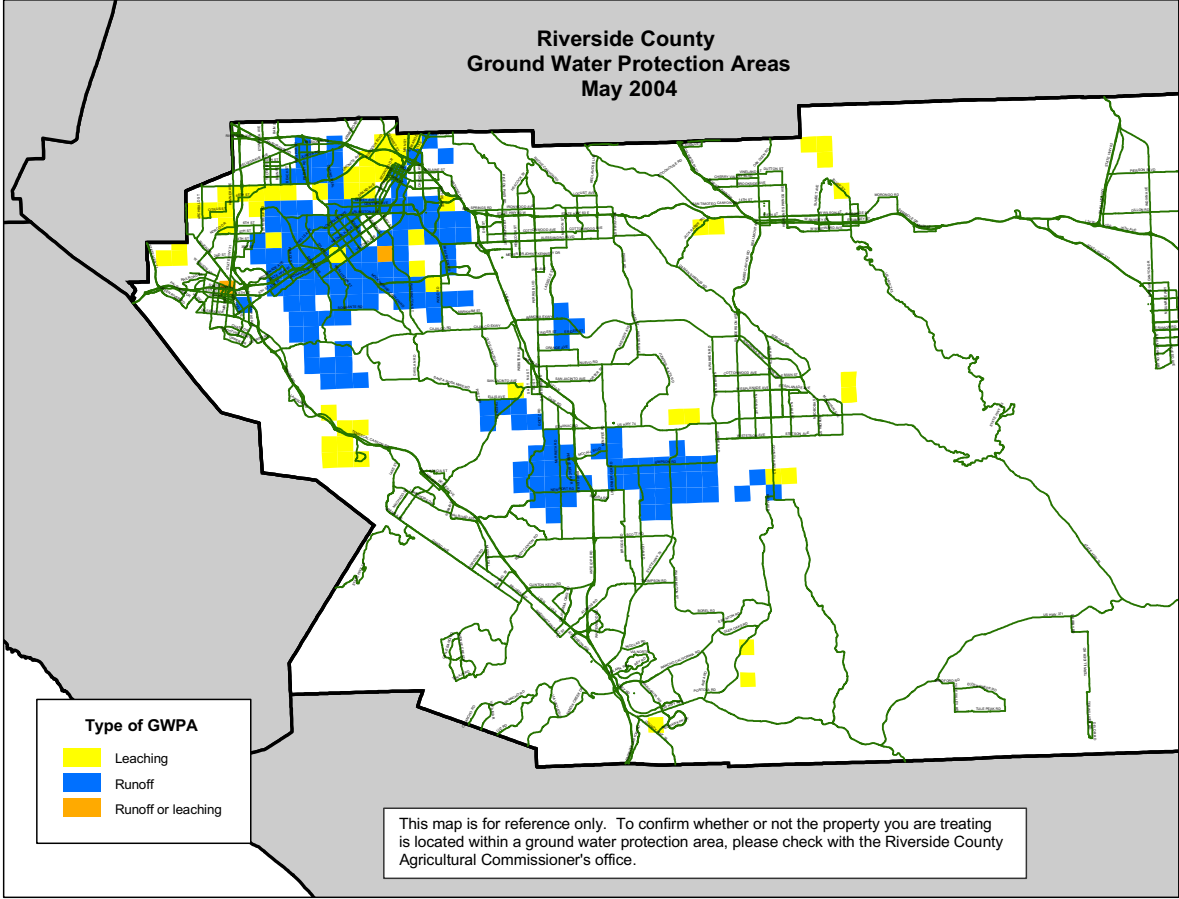
Locations of GWPAs can be accessed in the following ways:

- [California Pesticide Information Portal \(CalPIP\)](#)
Use the interactive California Information Portal to locate GWPAs.
- [Ground water protection area lists](#)
Public Land Survey System designations and vulnerability types for GWPAs. Only counties that have GWPAs are listed.

dpr

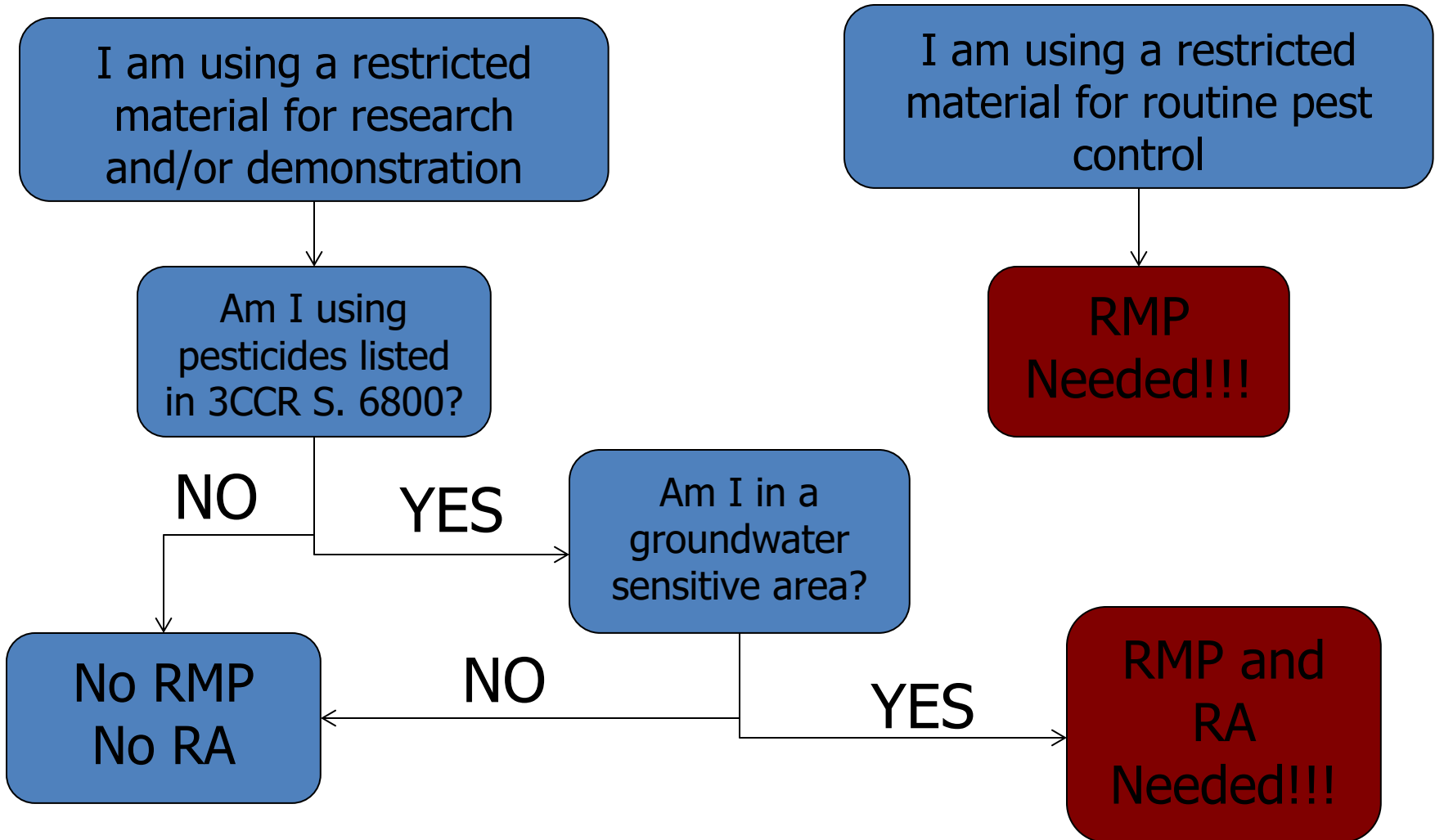
- [About DPR](#)
- [Contact Us](#)
- [Customer Service Survey](#)

Groundwater Protection Areas



How do I know if I need a Research
Authorization or a Restricted Materials
Permit?

Do I need an RA or a RMP?



TRAINING REQUIREMENTS

Do you have unlicensed pesticide applicators that work under your supervision?

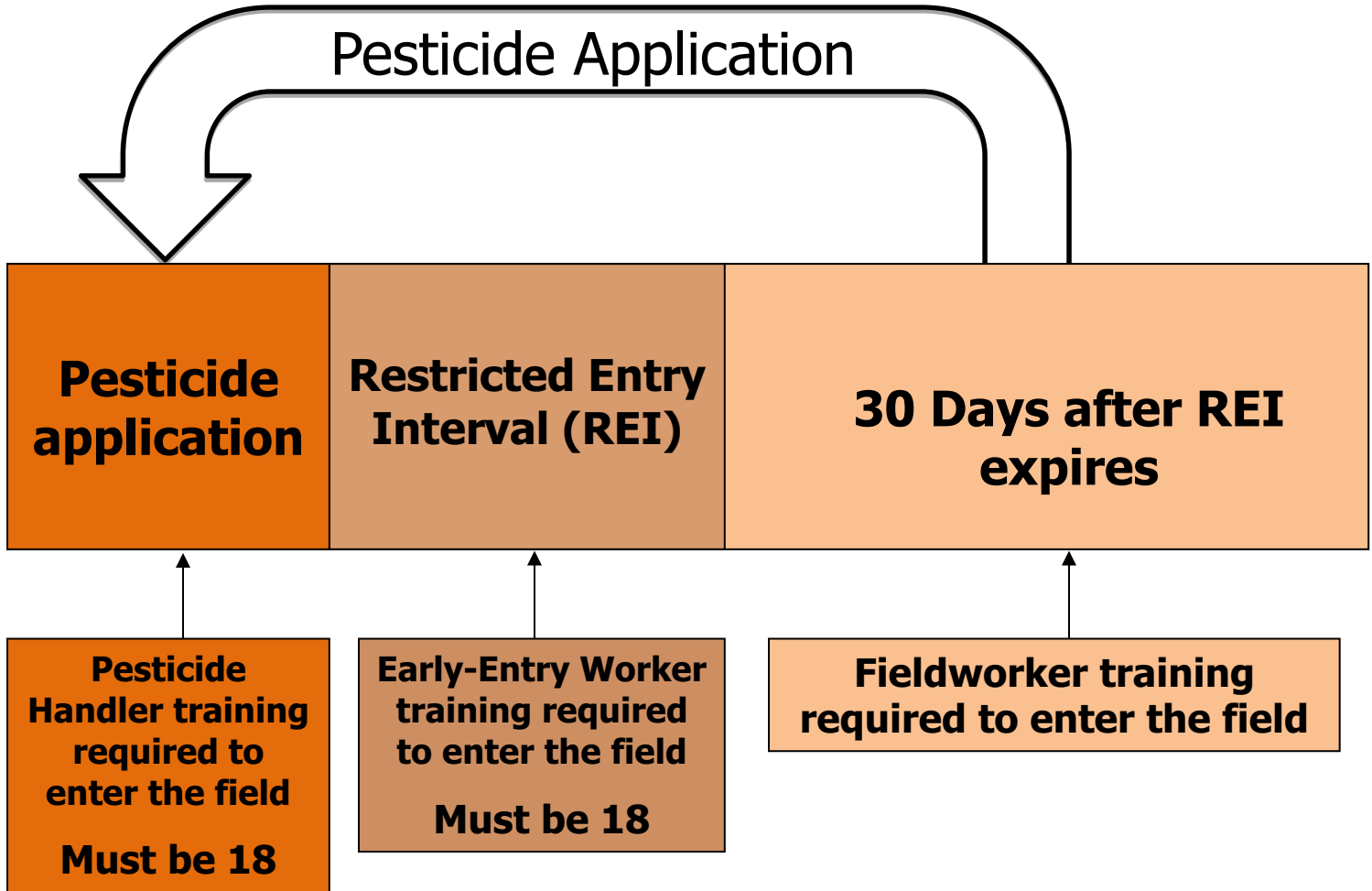
Do you have fieldworkers that work under your supervision?

Pesticide Safety Training

- Must include information on pesticide hazards and safety prior to any handling of pesticides.
- Must include laws and regulations applicable to all activities they may perform.
- See training requirements handout



Entering a Treated Field: who needs to be trained and when

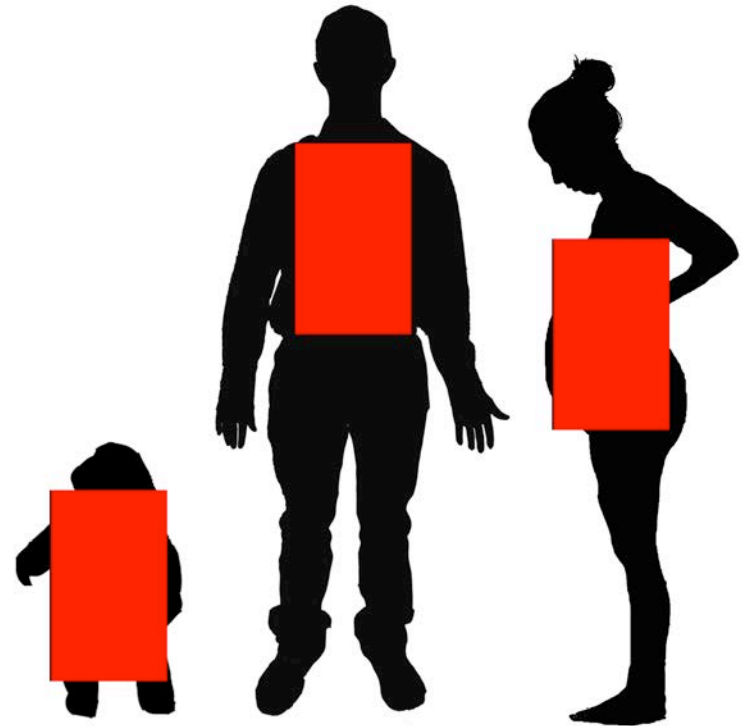


Where do I Find Training Resources?

- Contact Lisa (that's me)
- OPIC website:
<http://ucanr.edu/sites/opic/>
- ANR Environmental Health & Safety Web Site
 - <http://safety.ucanr.org/>
 - Brian Oatman, R&E Centers Environmental Health & Safety Coordinator
 - (530) 752-6024
 - baotman@ucdavis.edu

Training Materials Available for Checkout

- Poster-sized labels
- Fieldworker training kit
- Signal word poster
- Anything else you're interested in?



I. Danger **Poison**

Peligro **Veneno**

I. Danger

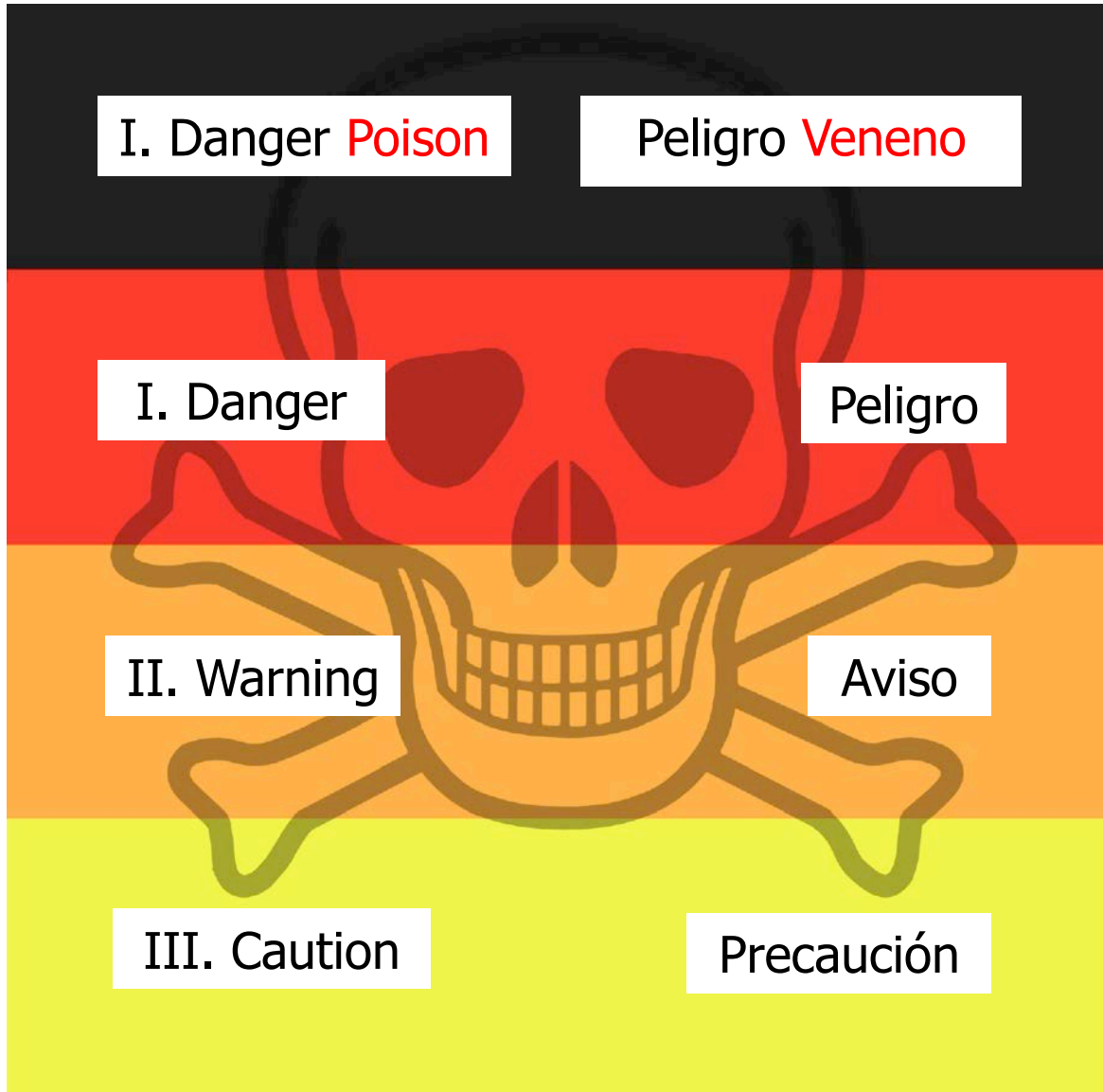
Peligro

II. Warning

Aviso

III. Caution

Precaución



Information Available at ANR EH & S Web Site

- Ag Worker Protection Program
- Confined Space Program
- Disposal of Chemical Waste
- Employee Health & Safety Training
- Experimental Use of Pesticides
- Emergency Eyewash & Shower Placement/Design



Environmental Health & Safety Notes – Agricultural Operations

- Pesticide Glove Use
- General Tractor Safety
- PTO Safety
- Pinch Point Hazards
- High-Pressure Washer Safety
- All-Terrain Vehicles
- Flail Mower and Shredder Safety
- Shear and Cutting Point Hazards
- Fence Safety
- And Many More

Information Available at ANR EH & S Web Site

- Health & Safety Training Library
- Pesticide Use & Handling
- Respiratory Protection Program
- Storage and Removal of Regulated Waste

SUPERVISOR RESPONSIBILITIES

Supervisor

- Employee of the UC working as a researcher, project leader, Principal Investigator or designated representative responsible for execution of any pesticide research project, employee training, or pest control procedure.

Responsibilities Incurred by Employees of UC

- Supervisor:
 - Provide a safe work environment and provide training to persons working under their direction.
 - Ensure that pesticides are used in accordance with State and Federal laws, regulations, and label requirements.
 - Make employees aware of the hazards of the chemicals and pesticides being used for experimentation
 - Use the pesticide label as a guide to employee training.
 - In absence of a registered label, use the MSDS as guide to training and personal protective equipment requirements.

Employee of UC

- Any person whose current UC position description or Ag Experiment Station project description includes responsibilities for pest management research and demonstration.

What About County Employees?

- If working with or under the supervision of a UC employee, ensure that they are trained and wear appropriate safety equipment.



Other General Requirements

- The supervisor shall meet the requirements of state regulations for:
 - Working alone with pesticides (Category 1)
 - Contact every 2 hours by day, 1 hour at night
 - Clothing change area
 - Mixing and loading site requirements
 - Work clothing
 - Protective equipment
 - Adequate light
 - Servicing equipment
 - Equipment specifications
 - Availability of MSDSs

RE-ENTRY AND POSTING REQUIREMENTS

Restricted Entry Interval

No person shall enter any area treated with a pesticide unless he or she follows the labeling directions for entry activities.



Pesticides with State Specific REIs (3 CCR Section 6772)

- Azinphos-methyl (Guthion)
- Chlorpyrifos (Lorsban)
- Diazinon
- Endosulfan (Thiodan)
- Methidathion (Supracide)
- Methomyl (Lannate)
- Parathion-methyl (non-encapsulated)
- Phorate (Thimet)
- Phosmet (Imidan)
- Propargite (Omite/Comite)
- Sulfur (not specific to formulation)

Pesticides with State Specific REIs

PESTICIDE	CROPS					OTHER CROPS
	APPLES	CITRUS	CORN	GRAPES	PEACHES/ NECTARINES	
Azinphos-methyl	14(B)	30		21	14(B)	14(A)(B)
Chlorpyrifos		2				
Diazinon		5		5	5	
Endosulfan	2	2	2	2	2	2
Malathion		1		1	1	
Methidathion		30				
Methomyl				7(C)		
Parathion-methyl (non-encapsulated)	14	14(D)	14(D)	14(E)	21	14(D)
Phorate (Thimet)			7			
Phosmet (Imidan)				5	5	
Propargite	21	42	7	30	21	21(F)(G)
Sulfur				3(H)		

(A) This restricted entry interval for other crops applies to stone fruit, such as apricots, cherries, plums, and prunes, and pome fruit, such as pears, only. Stone fruit does not include almonds and other nut crops.

(B) If the total azinphos-methyl applied in the current calendar year is 1.0 pounds per acre or less, thinning may be done after seven days.

(C) Applications of methomyl made after August 15, have a 21-day restricted entry interval. This interval may be terminated after 10 days if leaf samples tested pursuant to Section 6774 (c)(4) show 0.1 micrograms per square centimeter or less of dislodgeable foliar residue of methomyl.

(D) This restricted entry interval applies only when more than one pound per acre of non-encapsulated parathion-methyl is applied.

(E) The restricted entry interval for non-encapsulated parathion-methyl on grapes in Monterey County is six days.

(F) The restricted entry interval for strawberries and field grown roses treated with propargite is 3 days.

(G) The restricted entry interval for cotton fields treated with propargite is seven days. However, from the end of the restricted entry interval until the beginning of harvest, the employer shall assure that employees entering propargite treated cotton fields wear work clothing with long sleeves and legs and gloves.

(H) This restricted entry interval for sulfur applies from May 15 through harvest in the counties of: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare; and during March and April in Riverside County.

In Absence of Labeling

- Do not enter treated areas for 4 hours after application unless protected. After 4 hours, anyone entering the area must wear shoes and socks, a long sleeved shirt, and long pants.
- Non-Ag and Urban areas: Persons shall not enter areas treated with liquid formulations for 2 hours and until the treated area has dried. When using baits, dusts and other dry formulations, persons should not enter the area during the application.
- Standard industry care and practice should be observed.



Posting Treated Plots

- Post in accordance with any applicable pesticide label or regulation.
- For non-ag and urban areas, notify the owners or residents of the treated property with information indicating the nature of the treatment, time and date of treatment, and any special instructions regarding restricted entry or use after treatment

Posting Issues



- Verify with property owner and/or PCO that a REI is not in effect.
- Double-check any entry points for REI warning sign.
- Immediately follow-up on any illness complaints after employees work in a grower's field/orchard.
- Remove posting signs within 3 days of REI expiration.

PPE FOR UNREGISTERED PESTICIDES

Personal Protective Equipment (PPE) for Unregistered Pesticides

- If equivalent to Category I for eye or skin damage:
 - Coveralls over long-sleeved shirt
 - Long pants
 - Chemical-resistant gloves
 - Chemical-resistant footwear plus socks
 - Protective eyewear
 - Chemical resistant headgear for overhead exposure
 - Chemical-resistant apron when cleaning equipment, mixing or loading

Personal Protective Equipment (PPE) for Unregistered Pesticides

- If equivalent to Category I for systemic toxicity:
 - Long-sleeved shirt
 - Long pants
 - Chemical-resistant gloves
 - Shoes plus socks
 - Protective eyewear (face shield for mixers and loaders)
 - Chemical-resistant apron when mixing or loading
 - Respirator, where required by label



MATERIAL SAFETY DATA SHEET

Syngenta Crop Protection, LLC
Post Office Box 18300
Greensboro, NC 27419

In Case of Emergency, Call
1-800-888-8372

1. PRODUCT IDENTIFICATION

Product Name:	GRAMOXONE INTEON	Product No.:	A7813K
EPA Signal Word:	Danger-Poison		
Active Ingredient(%):	Paraquat Dichloride (30.1%)	CAS No.:	1910-42-5
Chemical Name:	(1,1'-dimethyl-4,4'-bipyridinium dichloride)		
Chemical Class:	Herbicide		
EPA Registration Number(s):	100-1217	Section(s) Revised:	3

2. HAZARDS IDENTIFICATION

Health and Environmental

Fatal if inhaled. May be fatal if swallowed. Causes eye and skin irritation.

Hazardous Decomposition Products

Combustion products of dry material: Carbon dioxide, carbon monoxide, chlorine, hydrogen chloride, possible trace amounts of phosgene, nitrogen oxides, ammonia, and other toxic and noxious fumes.

Physical Properties

Appearance: Bluish green to dark green liquid
Odor: Characteristic; strong

Unusual Fire, Explosion and Reactivity Hazards

Hydrolyzes in alkaline media. This product reacts with aluminum to produce hydrogen gas. Do not mix or store in containers or systems made of aluminum or having aluminum fittings.

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

STORAGE, TRANSPORTATION AND DISPOSAL

Storage, Transportation, Disposal of Pesticides

- Containers or equipment that hold or have held pesticides shall not be stored, handled, emptied, disposed of, or left unattended in such a manner that they may present a hazard to persons, animals, food, feed, crops, or property.



Storage and Delivery

- The supervisor shall either:
 - Store all containers or equipment in a locked enclosure, or
 - Provide a responsible person to maintain control over the containers at all times.



Storage and Delivery

- When not being used, all pesticide containers shall have lids and closures securely fastened.
- Pesticides shall not be delivered to any property unless they are stored or controlled as required.

Pesticide Storage



Posting of Pesticide Storage Areas

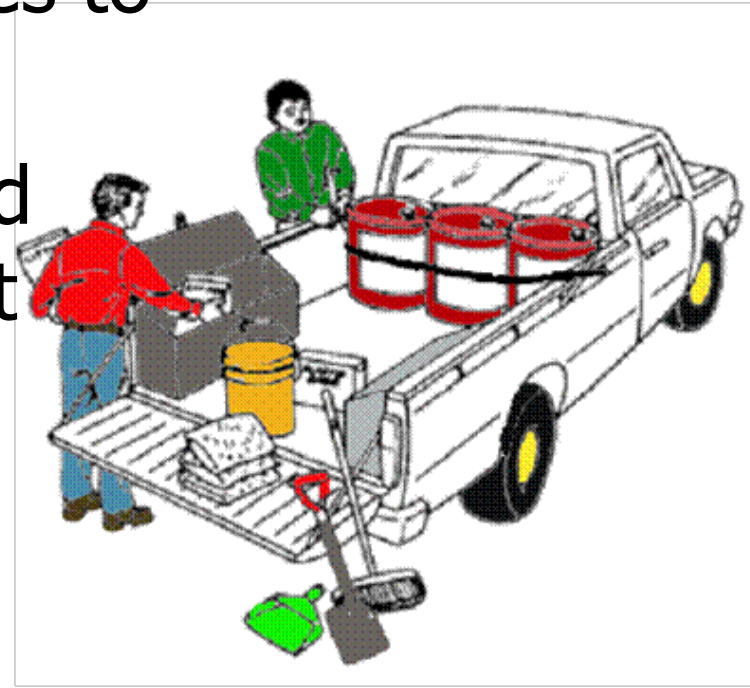
- All areas where pesticides or their used containers are stored shall be posted with warning signs as required by 3 CCR, Section 6674 in English and any other appropriate language.
- For unregistered pesticides and related chemicals, the MSDS shall be used to determine the appropriate warning sign for posting.

Pesticide Storage Area Sign



Transportation Requirements

- Transport in a compartment separate from people, food, feed
- Secure containers to vehicles to prevent spillage
- Cover paper, cardboard, and similar containers to protect them from moisture.



Container Rinsing Requirements

- Each emptied container that has held less than 28 gallons of a liquid pesticide diluted for use shall be rinsed by the user at the time of use by the triple-rinse method or another rinse method approved by DPR.
 - For containers less than 5 gallons, each rinse shall be at least $\frac{1}{4}$ of volume.
 - For containers 5 gallons and larger, each rinse shall be at least $\frac{1}{5}$ of volume.



Pesticide Disposal

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

Getting Rid of Surplus Pesticides

- Dilute mixes and rinsates should be applied to application site
- Concentrates in original containers
 - Return to registrant/manufacturer, if willing to accept
 - Give registered products to cooperator, if s/he can legally use
 - Dispose of as hazardous waste



Unregistered Pesticides

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



Unidentified or Unlabeled Pesticides

- Store, transport, handle, and dispose of according to the standards established by State and County regulations for Category I pesticides.



PESTICIDE CONTAINER LABELING

Container Label Requirements

- Maintain manufacturer's label on the pesticide container



Service Containers

- Label with the following information:
 - Signal word from the pesticide label, if available
 - Name of pesticide
 - Name of manufacturer
 - Name of active ingredient (or mfg. Code no.)
 - **Name, address, and telephone number of the person responsible!**
- This includes backpack sprayers!

Prohibited Service Containers

- Avoid containers commonly used for food, drink, household products, or feed.
 - Soda, water and milk bottles
 - Mason jars
 - Ziploc bags sold for food storage



Allowed Service Containers

- Those designed for pesticide storage.
- Zip lock type bags not labeled for food storage.
- Other containers not sold as food storage
 - Nalgene jars
 - Screw top test tubes



Available at Craft Stores



PESTICIDE RECORDKEEPING AND REPORTING

Pesticide Use Record Keeping and Reporting

- Supervisor shall keep a record for each application:
 - Location of site
 - Plot size and total area treated
 - Each commodity, crop, or site treated
 - Pest species of concern
 - Date of application
 - Application method
 - Concentration and volume of pesticide applied
 - Date commodity was destroyed (when required)
 - Name of grower, where applicable



Records Retention

- Retained by supervisor, the supervisor's campus departmental office, the REC, or the appropriate county CE office.
- For 2 years after the final pesticide application.
- Made available upon request to the county agricultural commissioner or DPR





Pesticide Use Reporting Requirements

- Must report pesticide use on or off UC property
 - On UC Property: Either directly as the person responsible or through other means such as a monthly summary of the REC
 - Off UC Property: Provide information to operator of property for his monthly summary report
- Must be reported within 7 days for restricted materials or 30 days for other materials
- Some CACs may request other forms for reporting such as DPRs RA reporting form

**COMMERCIAL PESTICIDE
APPLICATOR'S LICENSE/CERTIFICATE**

Qualifications of Persons Supervising Pesticide Applications

- Persons directly supervising pesticide applications shall hold the Qualified Applicator Certificate (QAC).
- It is recommended that employees whose responsibilities include applying pesticides be certified as a Qualified Applicator (QAC).

QAC License Categories

■ Laws, Regulations and Basic Principles

- Residential, Industrial and Institutional
- Landscape Maintenance
- Right-of-Way
- Plant Agriculture
- Forest
- Aquatic
- Regulatory
- Seed Treatment

- Animal Agriculture
- Demonstration and Research
- Health Related
- Wood Preservative
- Antifouling Tributyltin
- Sewer Line Root Control
- Field Fumigation
- Microbial Pest Control
- Maintenance Gardener

Licensing and Certification Fees

Individual Licenses/Certificates				
License or Certificate Type	New Application Fee*	Fee Per Examination	Renewal Fee	Late Renewal Penalty**
Agricultural Pest Control Adviser License	\$80	\$50	\$140	\$70
Pest Control Aircraft Pilot Certificate	\$60	\$50	\$90	\$45
Pest Control Dealer Designated Agent License	\$25	\$50	\$50	\$25
Qualified Applicator License	\$80	\$50	\$120	\$60
Qualified Applicator Certificate	\$40	\$50	\$60	\$30

*Fee to apply for license or certificate. After submitting your application, you have one year to pass the Laws and Regulations and the category examinations. After one year, you must submit another application fee.

**The penalty applies if your renewal application is postmarked after December 31 of the year it expires. It is added to the renewal fee.

<http://www.cdpr.ca.gov/docs/license/fees.pdf>

Exam Schedule

MONTH	LOCATION	COUNTY	DATE/S	FILING-DATE
JANUARY	GALT	SACRAMENTO	21 (SAT)	12/21/2016
	FONTANA	SAN BERNARDINO	24,25 (TUES,WED)	12/20/2016
FEBRUARY	SALINAS	MONTEREY	7, 8 (TUES, WED)	01/04/2017
	VISALIA	TULARE	15 (WED)	01/12/2017
	SAN DIEGO	SAN DIEGO	22 (WED)	01/18/2017
MARCH	ALAMEDA	ALAMEDA	9 (THUR)	02/06/2017
	SANTA MARIA	SANTA BARBARA	15 (WED)	02/13/2017
	NAPA	NAPA	28 (TUES)	02/24/2017
ADDITIONAL MONTHS TO BE POSTED BY JANUARY 2017				

http://www.cdpr.ca.gov/docs/license/exam_sched.pdf

Study Materials

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Study Materials for Licensing Exams

[Back to Licensing and Certification Program](#)
[A to Z Licensing Index](#)

Study Materials for Individual Licenses and Certificates

- [Agricultural Pest Control Advisor License, PDF](#) (49 kb)
- [Pest Control Dealer Designated Agent License, PDF](#) (19 kb)
- [Pest Control Pilot Certificates, PDF](#) (25 kb)
- [Qualified Applicator Certificate, PDF](#) (64 kb)
- [Qualified Applicator License, PDF](#) (67 kb)

Study Guides

These study guides are available for downloading. If you would like a hard copy, please submit the [DPR Publication Order Form, PDF](#) (35 kb)

- [Laws and Regulations Study Guide, PDF](#) (3.9 mb)
- [Excerpts from U.S. Department of Agriculture Treatment Manual, PDF](#) (5.1 mb)
- [Microbial Pest Control Study Guide, PDF](#) (3.3 mb)
- [Pest Control Aircraft Pilot Certification Study Guide, PDF](#) (4.8 mb)
- [Sewer Line Root Control, PDF](#) (2.2mb)
- [Field Soil Fumigation Study Guide Addendum, PDF](#) (4.2 mb)

Other publication links

- [Catalog of University of California Integrated Pest Management Program \(UCIPM\) Publications](#)

Featured Links

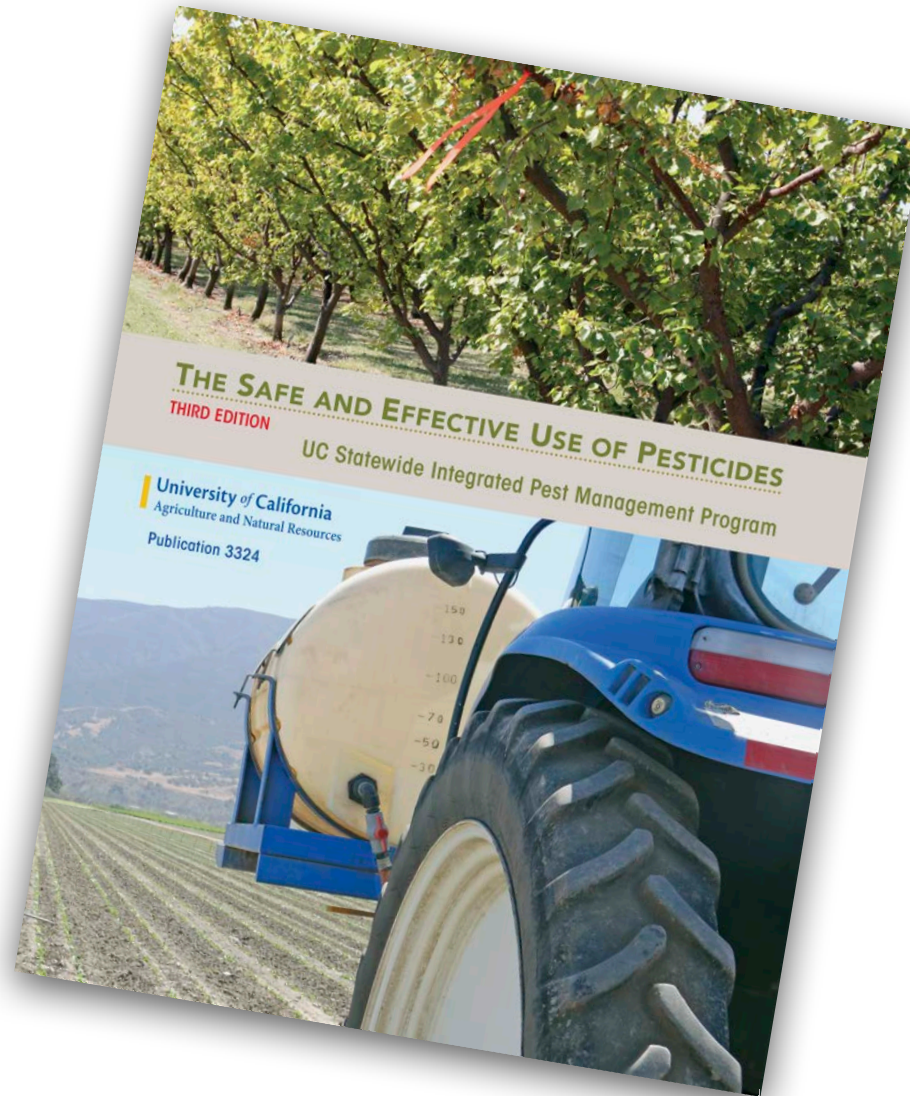
- [Community Guide to Recognizing and Reporting Pesticide Problems](#)
- [Complaints](#)
- [Compliance assistance for employers](#)
- [Decisions pending and opportunities for public participation](#)
- [Environmental Justice](#)
- [How to get a license or product registration](#)
- [Information for physicians](#)
- [School IPM](#)
- [Structural Pest Control Board](#)

Reference Links

- [Databases](#)
- [Laws](#)
- [Look up pesticide illnesses](#)
- [Look up pesticide products](#)
- [Performance and accountability](#)
- [Regulations](#)
- [Translations](#)
- [Useful links](#)

<http://www.cdpr.ca.gov/docs/license/studymat/index.htm>

Study Materials



Continuing Education for QAC/QAL

- Accumulate at least 20 hours of approved continuing education every 2 years before certificate renewal.
- A minimum of 4 of the 20 hours must cover the topic of pesticide laws and regulations



UNIVERSITY OF CALIFORNIA AGRICULTURE & NATURAL RESOURCES

UC IPM

Statewide Integrated Pest Management Program



PRINT

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Online training

The UC Statewide IPM Program provides online courses that reflect the newest advances in pest management and related topics. Selected courses are approved by the California Department of Pesticide Regulation (DPR) for Continuing Education units. Some are also approved for structural units from the Structural Pest Control Board (SPCB).

Additional training materials, including DVDs, books, and leaflets, are available in the [Publications](#) section. Check the [Events](#) and Workshops page for in-person presentations and hands-on training opportunities.

For pest management professionals and pesticide applicators

Citrus IPM Free

To receive DPR credit for 2016, this course must be completed by midnight, Dec. 31.

(CEUs: 1.0 "Other" from DPR for each individual module)

Course consists of six individual modules, one for each of the key pests of California citrus and their associated natural enemies. Includes information on life cycle, behavior, and management of each pest.

Enroll

- [California Red Scale](#)
- [Citrus Red Mite](#)
- [Citricola Scale](#)
- [Cottony Cushion Scale](#)
- [Citrus Peelminer](#)
- [Forktailed Bush Katydid](#)

Pesticide Application Equipment and Calibration Free

To receive DPR credit for 2016, this course must be completed by midnight, Dec. 31. [Enroll](#)

(CEUs: 1.5 hr "Other" From DPR; 1.5 hr Technical towards Branches 2 & 3 from SPCB – meets the CE category of Pesticide Use and Application for licensed applicators.)

Pesticide Resistance

Free

To receive DPR credit for 2016, this course must be completed by midnight, Dec. 31.

[Enroll](#)

(CEUs: 2.0 hr "Other" from DPR)

Course provides information on pesticide resistance in fungi, insects, and weeds and discusses practical ways of managing or delaying resistance.

Proper Pesticide Use to Avoid Illegal Residues **(NEW)**

\$40

Enrollment for this course will end at 5pm on Friday, December 30. To receive DPR credit for 2016, this course must be paid for before 5pm, Dec. 30 and completed by midnight, Dec. 31.

[Enroll](#)

(CEUs: 2.0 hr "Pesticide Laws & Regulations" from DPR)

Course provides information on pesticide residues, monitoring, tolerances, and risk assessment, and focuses on important sections of the pesticide label, presenting real-life scenarios where the most important factors leading to illegal residues are identified. If you do not need CEUs, view the content of this course on [YouTube](#) for free.

Providing IPM Services in Schools and Child Care Settings **(UPDATED IN 2016)**

Free

To receive DPR credit for 2016, this course must be completed by midnight, Dec. 31.

[Enroll](#)

(CEUs: 1.0 hr "Other" and 1.0 hr "Pesticide Laws & Regulations" from DPR; 1.0 hr "Rules and Regulations and 1.0 hr "IPM" from SPCB) Meets the training requirement of the Healthy Schools Act that went into effect July 1, 2016.

Provides information on the Healthy Schools Act (HSA), using IPM services to manage pests in schools and child care centers, and practical ways to use IPM in business while complying with the HSA.

Urban Pesticide Runoff and Mitigation — four modules

Free

To receive DPR credit for 2016, this course must be completed by midnight, Dec. 31.

[Enroll](#)

(CEUs: 1.0 hr "Other" from DPR; 1.0 hr "IPM" from SPCB* for each individual module)

Provides information on pesticides, their impact on our water resources, and practical solutions for reducing runoff.

- IPM - Pesticide Properties
- Water Quality & Mitigation: Bifenthrin and Fipronil
- Impact of Pesticides - Urban Pesticide Runoff
- Herbicides and Water Quality (*DPR credit only)

The primary license location is:

- Department of Pesticide Regulation
Pesticide Enforcement Branch
Licensing and Certification Program
1001 I Street
Sacramento, CA 95814-2828
- www.cdpr.ca.gov/docs/license/liccert.htm
- Questions call (916) 445-4038

RECOMMENDATIONS AND PUBLICATIONS

Recommendations



- Recommendation means the giving of any instruction or advice on any agricultural use as to any particular application on any particular piece of property.
- A person making a written recommendation does not incur an obligation to ensure that the actual use follows his or her recommendation.

UC Recommendation Requirements

- A written recommendation is required when UC personnel are engaged in official duties relating to agricultural use of pesticides and when they give any instruction or advice on a particular application on a particular piece of property.

Pesticide Recommendations

- Pesticide use recommendations shall conform to usage prescribed by labels registered by the USEPA and DPR
- Recommendations must be in writing
- Written recommendations should identify pesticides by official common name; when necessary, brand names may be used (UC/DPR agreement).





Published or Presented Results

- Published or otherwise presented results, descriptions and demonstrations of experiments in which pesticides are used in a manner that does not conform with registered uses shall be clearly identified as experimental results only. Where appropriate, a warning shall be included that similar uses may result in contaminated crops with illegal pesticide residues.

Newsletters, Other Publications & Presentations

- You must ensure that any published statements in newsletters, bulletins, other written material or presentations regarding pesticide use are legal. If in doubt, contact the UC Statewide Pesticide Coordinator.

MEDICAL SUPERVISION

Medical Supervision



- 3CCR Section 6728
- Applies only to cholinesterase inhibiting pesticides.
- Employee handles pesticide any part of a day for more than 6 days in any 30 consecutive days.
- Excluding days where solely using closed mixing system or water soluble bags.

ORGANIC PESTICIDE RESEARCH

Organic Research Issues

- Always verify with grower that material(s) to be used in research plot are compliant with the National Organic Program (NOP) and their certifier.
- Best not to make written recommendations for organic plots, unless you are absolutely certain that the material is compliant.
- Even exempt materials must be NOP compliant and approved by the certifier.
- Any material must be a part of the grower's approved organic farm plan - before using.

Chemicals Exempt from Registration



- Castor oil
- Cedar oil
- Cinnamon & Cinnamon oil
- Citric acid
- Citronella & Citronella oil
- Cloves & clove oil
- Corn gluten meal
- Corn oil
- Cottonseed oil
- Dried Blood
- Eugenol
- Garlic & garlic oil
- Geraniol
- Geranium oil
- Lauryl sulfate
- Lemongrass oil
- Linseed oil
- Malic acid
- Mint & mint oil
- Peppermint & peppermint oil
- 2-Phenethyl propionate
- Potassium sorbate
- Putrescent whole egg solids
- Rosemary & rosemary oil
- Sesame & sesame oil
- Sodium chloride
- Sodium lauryl sulfate
- Soybean oil
- Thyme & thyme oil
- White pepper
- Zinc metal strips

Note: A tolerance or exemption from tolerance is still required.
Many of the above do not have either.

Organic Research Issues



Approved Organic Materials

OMRI

OMRI Listed – Naturally Trusted

E-mail*

Password* Go

Have you forgotten your e-mail or password?

OMRI Lists

Where To Buy

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Welcome to the Organic Materials Review Institute

The Organic Materials Review Institute (OMRI) supports organic integrity by providing organic certifiers, growers, manufacturers, and suppliers an independent review of products intended for use in certified organic production, handling, and processing. OMRI is a 501(c)3 nonprofit organization founded in 1997. When companies apply, OMRI reviews their products against the organic standards. Acceptable products are OMRI Listed® and appear on the *OMRI Products List*® or *OMRI Canada Products List*®. OMRI also provides technical support and training for professionals in the organic industry.

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News

OMRI is Hiring!
(February 13, 2015) OMRI is looking for a Product Review Coordinator to join its growing team. As part of the OMRI Review Program, Product Review... [Read More](#)

NOP Clarifies Biobased Mulches
(February 4, 2015) The National Organic Program (NOP) recently added an

How Can We Help You?

<h4><u>Find Products</u></h4> <p>OMRI® Listed products undergo a rigorous review to ensure that they comply with organic standards. Subscribe to receive updates.</p>	<h4><u>Get Listed</u></h4> <p>The OMRI review service verifies your credibility and allows customers to confidently choose your product for organic production.</p>	<h4><u>Become a partner</u></h4> <p>OMRI was founded by organic certifiers and continues to serve certifiers and their clients with crucial information to ensure organic integrity.</p>
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<https://www.omri.org/>

Approved Organic Materials

The screenshot shows the Washington State Department of Agriculture (WSDA) website. The header features the WSDA logo and the text "Washington State Department of Agriculture". There are social media icons for YouTube, Twitter, Facebook, and RSS, along with a search bar and a "Print" button. The breadcrumb trail is "Home / foodanimal / organic / materialslists.aspx < YOU ARE HERE". The page is dated "Page updated/verified: Jan 05, 2015".

Material Lists & Material Registration
Organic Food Program
Program Manager: Brenda Book
[Click here for more information](#)

Contents

- [1. Materials Approved for Use in Organic Production & Handling](#)
- [2. Input Material Registration Information and Forms](#)
 - [A. Material Registration Guide & Rules](#)
 - [B. New Product Applications](#)
 - [C. Renewal Applications](#)
 - [D. Additional Application Information and Forms](#)

To view PDF files, [download Acrobat Reader](#).
To view Word files, [download Microsoft Word Viewer](#)

Materials Approved for Use in Organic Production & Handling
The National Organic Standards require that all certified organic producers, processors and handlers use materials that comply with the applicable parts of the Standards [7 CFR Part 205]. The Standards include the National List, which dictates allowed and prohibited substances for use in organic crop and livestock production, as well as substances allowed in organic food processing and handling.

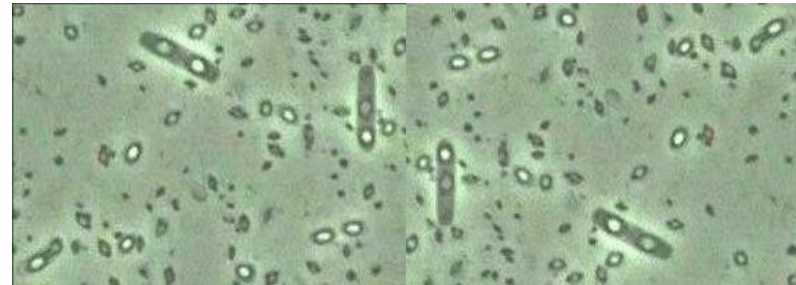
WSDA Home
Food Safety & Consumer Services ▶
Organic
Advisory Board
Contact Us
Producers
Handlers
International
Laws & Rules
Materials Lists & Material Registration
Organic System Plans
Processors
Public Disclosure
Retail Stores & Restaurants

<http://agr.wa.gov/FoodAnimal/Organic/MaterialsLists.aspx>

MICROBIAL PESTICIDES

Microbial Pesticides

- The USEPA generally requires a notification or a Federal EUP for any experimental program involving the deliberate release into the environment of **living, genetically engineered microbial pesticides**, irrespective of the acreage involved.
- The DPR Pesticide Registration Branch must also be notified of any proposed field testing (on or off UC property) by UC personnel involving genetically engineered microbial pesticides.



SOIL FUMIGANT BUFFER ZONES

Buffer Zones

- Must be adhered to
 - Labeled
 - Regulation
- Waivers for small plots or small amounts of fumigants are possible
 - Must obtain approval from local CAC

Fumigation Requirements

- UC employees are not completely exempt from fumigation requirements
 - Training
 - PPE
 - Buffer zones
 - Other label and regulation requirements
- QAL/QAC category “Research & Demonstration” does cover fumigation. Category “O” is not needed
- A Fumigation Management Plan is NOT required
- For training materials:
http://www.epa.gov/oppsrrd1/reregistration/soil_fumigants/

Questions?

I'm confused,
oh wait,
maybe I'm not.

Take our Survey! Win a Prize!



<http://ucanr.edu/opiceval>

Respond by April 20, 2017!!!

Lisa Blecker
530-750-1251
OPIC@ucanr.edu

<http://www.ucanr.org/sites/opic>

<http://www.ipm.ucdavis.edu/>