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Marijuana Grow Site Chemicals

Kern County Sheriff's Office deputies are continually encountering illegal cannabis grow sites. Illegal grow sites are found throughout most of the year in the valley, mountain and desert areas of the county.

This training bulletin will serve as a safety guide for first responders in the event an illegal grow site is discovered. Illegal grow sites are extremely dangerous due to several factors, such as armed suspects tending to the grow site and the chemicals used to grow the cannabis. This bulletin will cover hazardous chemicals discovered in these grow sites and how to proceed if they are discovered.

The most dangerous chemical, typically found in mountain and some valley grow sites, is various forms and name brands of Carbofuran. Carbofuran is a highly toxic pesticide. It can be absorbed into the body by inhalation, dermal absorption, introduction through the eyes, mucous membranes, or through open wounds. This toxic chemical can cause severe illness if exposed, and it has required hospitalization for narcotics investigators throughout the state in the past. The Narcotics Unit found a majority of grow sites have had Carbofuran chemicals on the cannabis plants or was present in the grow site area. Attached is a 2018 CVC HIDTA bulletin explaining more about the chemical, dangers, description, and photographs of the Carbofuran found in grow sites. Also attached is a printable pocket guide on various common chemicals, which have been or may be located in cannabis grows throughout the state. The pocket guide covers pesticides, fungicides, and fertilizers.

If you ever encounter Carbofuran or any chemical you cannot identify inside of a cannabis grow, do not manipulate the plants in any way. Secure the scene and contact either a Narcotics Investigator or the Narcotics Supervisor to assist you in identifying the chemical. If Carbofuran is encountered in an illegal grow site, a narcotics callout may be required. Callouts should be requested through your on-duty sergeant or in the absence of a supervisor, through the Communications Center.



CARBOFURAN IN MARIJUANA GROW SITES IS A SIGNIFICANT OFFICER SAFETY HAZARD

Essential Points:

- Carbofuran is a pesticide that is extremely toxic to humans and other vertebrates, increasingly encountered in illegal marijuana grow sites within California.
- Officers entering marijuana grow sites must recognize evidence of Carbofuran usage and take precautions to avoid exposure.
- There are indications that illegal marijuana growers intentionally use Carbofuran at grow sites to discourage or delay eradication of their crops by law enforcement officers.
- Evidence of Carbofuran or other chemical use in marijuana grow sites should be carefully documented to support potential prosecution or penalty enhancement under applicable Federal and/or state laws.



This QúFURAN bottle was found at an illegal marijuana grow site in Tulare County, CA in 2018

and QúFURAN (manufactured in Mexico and the most commonly encountered brand in California's illegal marijuana grow sites). Carbofuran most often appears in marijuana grow sites as a viscous pink or purplish liquid which dries to a chalky white after application. Growers may use tank or backpack sprayers to apply to marijuana plants, or spread it on with a cloth or brush. Carbofuran may also rarely be encountered as small pellets or granules.³ Carbofuran is an effective systemic insecticide; therefore some growers mix it with irrigation water for delivery to their marijuana plants, turning their water drums, tanks, cisterns and impoundments into hazardous, toxic reservoirs.

A 2014 CVC HIDTA bulletin reported the safety hazards to officers posed by Carbofuran, a highly toxic carbamate pesticide in use by illegal marijuana growers. The use of Carbofuran at illegal marijuana grow sites continues to increase: during the 2018 California outdoor growing season, Carbofuran was detected at 17 of 20 eradicated grow sites (85%) tested by science teams, and veteran eradication team members report encountering more Carbofuran every year. Used by the growers to control pests and maliciously poison wildlife, the danger presented by Carbofuran to officers cannot be overstated: oral ingestion of as little as a ¼ teaspoon can be fatal to a 170 pound human.¹ Carbofuran is also toxic by inhalation, dermal absorption, and introduction via the eyes, mucous membranes, or open wounds. Each year, personnel involved in marijuana eradication are injured by exposure to Carbofuran. Most recently in August 2018, six members of a team eradicating a grow site on the El Dorado National Forest in California were sickened and required treatment at a hospital. Medical tests confirmed Carbofuran exposure.

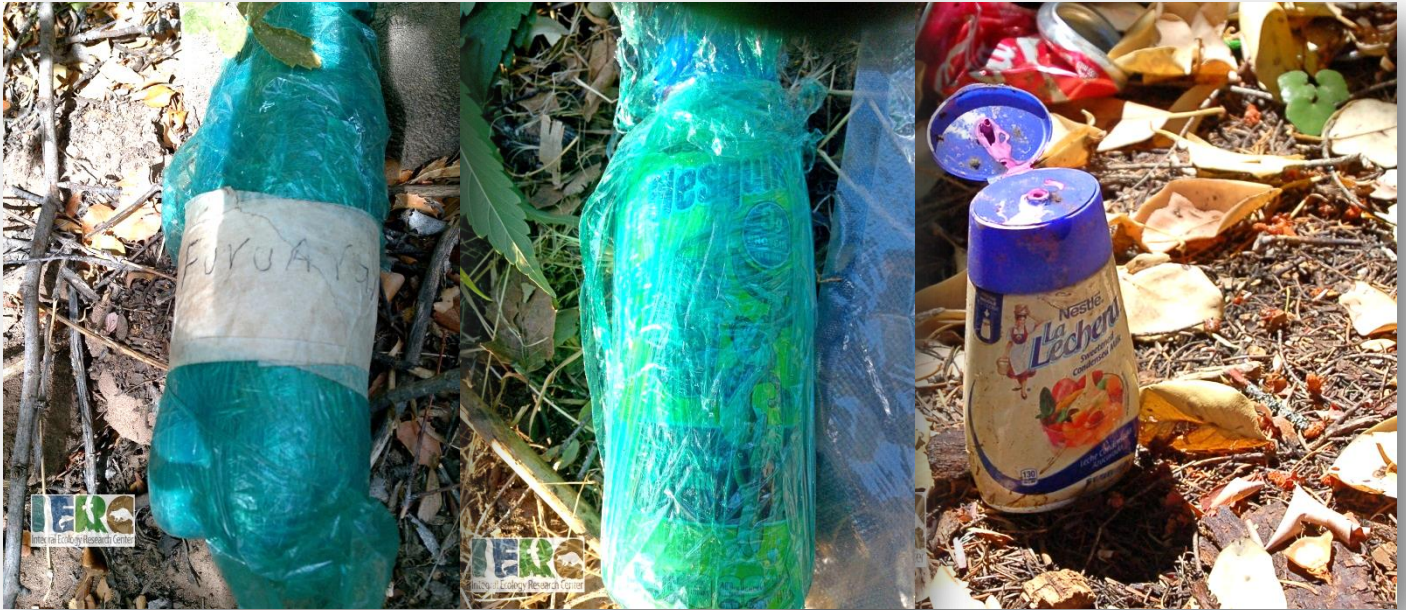
Carbofuran is a restricted use pesticide currently unapproved by the Environmental Protection Agency (EPA) for any applications in the United States.² Its many trade names include Furadan, Curater, Furacarb, Novadan

¹ "Carbofuran." EXTOTOXNET. June 1996. Accessed September 13, 2018. <http://pmep.cce.cornell.edu/profiles/extoxnet/carbaryl-diclotophos/carbofuran-ext.html>.

² *Federal Register* 74, no. 51 (March 18, 2009): 11551-1553. Accessed September 18, 2018. <https://www.federalregister.gov/>.

³ "Carbofuran." EXTOTOXNET. June 1996. Accessed September 13, 2018. <http://extoxnet.orst.edu/pips/carbofur.htm>.

The absence of branded pesticide containers in a grow site does not preclude the presence of Carbofuran: growers often repurpose beverage and other containers for mixing and storing the poison, and officers routinely find water and soda bottles containing Carbofuran or its residue.



These water and Nesquik bottles, repurposed to mix/store Carbofuran were found in an illegal marijuana grow site in Santa Barbara County, CA in 2018. Growers may have covered the bottles in green plastic to mark them as dangerous.

The pink liquid residue is a dead giveaway that this condensed milk bottle contains Carbofuran.

During the 2018 growing season, a suspect arrested in a Trinity County public land marijuana grow site strongly implied that illicit growers are increasing Carbofuran use in part to deter enforcement actions, and some have adopted the practice of leaving Carbofuran containers and other signs of use in plain view so teams will leave the sites without eradicating the plants.

Delaying eradication for up to 14 days should be considered if signs of active Carbofuran use are discovered in a marijuana grow site. Officers entering any marijuana cultivation site must be aware of the potential presence of Carbofuran or other hazardous chemicals and take precautions to minimize the chance of exposure:



A suspect at a 2018 Trinity County, CA illegal marijuana grow site stated he used this rag with a stick to mix Carbofuran into irrigation water for his marijuana plants.

- Wear long-sleeve shirts, long pants, hard-sided full leather boots, hat, eye protection, and chemical-resistant gloves; properly clean or replace these items between missions.
- Avoid contact with suspected chemicals and minimize physical contact with materials suspected to be contaminated.

- To reduce airborne contaminants, employ techniques causing the least disturbance to soil and plants when eradicating, e.g., using long-handled loppers instead of a machete to cut plants.
- A particulate-filtering face mask (N95) is recommended when eradicating or handling marijuana plants.
- Be aware of the symptoms of Carbofuran poisoning: weakness, headache, nausea, vomiting, abdominal cramps, diarrhea, tight chest, blurred vision, constricted pupils, and abnormal saliva flow. Seek immediate medical attention.

In May 2018, the U.S. Forest Service, Pacific Southwest Region issued *LE&I (Law Enforcement and Investigations) Marijuana Grow Site Chemical Safety Protocols, Revision 2.0* detailing exposure control/prevention, recommended protective equipment, emergency measures, and decontamination procedures. Law enforcement agencies engaged in marijuana eradication operations are encouraged to obtain this document and consider its recommendations.⁴

The use of Carbofuran and other chemicals in illegal marijuana cultivation sites, especially those located on public lands such as National Forests and National Parks may constitute violations of environmental law under various Federal and/or state statutes; or support the imposition of enhanced criminal and civil penalties. Accordingly, evidence of such use should be meticulously documented to support prosecution. Several jurisdictions in California have successfully prosecuted illegal marijuana growers for environmental crimes, and the U.S. Attorney for the Eastern District of California has identified the protection of public lands as a priority in marijuana crime prosecutions.



The well-circulated image from a 2016 Sierra County, CA marijuana grow site grimly illustrates the lethality of concentrated Carbofuran: the rabbit immediately perished after chewing the base of the marijuana plant, which is covered with the pesticide.

All photographic images courtesy of Dr. Mourad Gabriel and Dr. Greta Wengert, Integral Ecology Research Center (IERC), Blue Lake, CA.

⁴ U.S. Forest Service, Pacific Southwest Regional Office, 1323 Club Drive, Vallejo, CA 94592 (707) 562-8737.

A Pocket Guide to Pesticides Found in Illegal Cannabis Grow Operations





The Department of Pesticide Regulation (DPR) Cannabis Program works to protect human health and the environment from the adverse effects of illegal pesticide use on cannabis.

Illegal cannabis cultivators often misuse highly toxic, illegal pesticides. This leaves law enforcement, clean-up, and remediation crews at risk for exposure to potentially harmful chemicals.

This pocket guide contains an alphabetical list by type (fungicides, insecticides, miticides, plant growth regulators, and rodenticides) of chemicals routinely found in illegal cannabis grow sites. It includes descriptions, acute symptoms of exposure, and recommended personal protective equipment (PPE). For long-term side effects, consult a physician.

The products included in this guide were identified by law enforcement agencies through pictures and documentation of products commonly found at illegal grow sites.

The mention or identification of commercial pesticide products or trade names is not to be construed as either an actual or implied endorsement of such product or trade name by the State of California or the Department of Pesticide Regulation.

This guide is intended for informational purposes only for law enforcement and other agencies entering illegal cannabis grow sites.

Call **911** for emergency help. Contact the **California Poison Control System** at **(800) 222-1222** if you think you are experiencing symptoms of pesticide exposure.



PESTICIDE SAFETY TERMINOLOGY

Hazard Levels

DANGER - Highly toxic/fatal or corrosive

WARNING - Moderately toxic

CAUTION - Slightly toxic



Restricted Pesticides

A pesticide is deemed restricted based on the potential adverse effects it can have on human health or the environment. California restricted materials (which include federal restricted use pesticides) are regulated more tightly than general use pesticides.

Decontamination

Personnel and equipment should be decontaminated to the best of your ability when handling plants and material contaminated with pesticides. Always follow decontamination requirements found on a pesticide label and follow your agency's decontamination procedures.

FUNGICIDE

FERRIC SULFATE



Non-restricted

Common brand: Moss Out

Description: Grayish-white or yellow; powder or crystalline, lumpy solid, liquid

Found: In soil

Routes of exposure: Dermal, inhalation, ingestion

Symptoms of exposure: Eye, skin,

respiratory tract, and digestive tract irritation

PPE: Safety glasses, chemical resistant gloves, dust mask

Signal words may include: **CAUTION**, **WARNING**, **DANGER**

FUNGICIDE OR PLANT GROWTH REGULATOR

PACLOBUTRAZOL

Non-restricted

Common names/brands: Pac-Low, Trimmit, Bonzi, Cultar

Description: White; liquid, wettable powder

Found: On plants and in soil

Routes of exposure: Dermal, inhalation

Symptoms of exposure: Eye, skin, and respiratory tract irritation

PPE: Safety glasses, chemical resistant gloves, N95 filtering facepiece respirator

Signal words may include: **CAUTION,**
WARNING, DANGER

FUNGICIDE

TEBUCONAZOLE

Non-restricted

Common names/brands: ArmorTech, Offset, Omni Brand, Muscle, Onset, Orius, Quali-Pro

Description: Pale yellow; liquid, dust, granules, emulsions

Found: On plants and ground

Odor: Metallic

Routes of exposure: Dermal, inhalation, ingestion

Symptoms of exposure: Eye and skin irritation

PPE: Safety glasses, chemical resistant gloves, dust mask

Signal words may include: **CAUTION**, **WARNING**, **DANGER**

INSECTICIDE

PYRETHROID

BIFENTHRIN

Non-restricted

Common names/brands:

Ortho Max, Bug B Gon, Eliminator, Bifen

Description: Tan to off-white; liquid or granules

Found: On plants and ground

Routes of exposure:

Dermal, inhalation, ingestion, eyes

Symptoms of exposure:

Eye irritation, respiratory

tract irritation, skin tingling, burning, itchiness

Sensations generally subside after 12 hours

PPE: Safety glasses, chemical resistant gloves



Signal words may include: **CAUTION,**
WARNING, DANGER



INSECTICIDE

CARBAMATE

CARBARYL

Restricted material (except as bait)

Common names/brands: Sevin, Corry's, Kiwicare

Description: White/tan/brown; liquid, dust, granules, water soluble packages

Found: On plants and ground

Routes of exposure: Dermal, inhalation, ingestion

Symptoms of exposure: Fatigue, weakness, dizziness, confusion, nausea, vomiting, diarrhea, blurred vision, headache, sweating, tearing, drooling, tunnel vision, twitching, pinpoint pupils, difficulty breathing

Cholinesterase inhibitor: May impair the nervous system

PPE: Safety glasses, chemical resistant gloves, N95 filtering facepiece respirator

Signal words may include: **CAUTION**, **WARNING**, **DANGER**



INSECTICIDE

CARBAMATE

CARBOFURAN

BANNED IN THE U.S.

Common names/brands: Furadan, Q-Furan, Coradan, Furatox, JET, Novadan, Galfuran

Description: Pink; liquid, granules, dust

Found: On plants and in water bottles

Routes of exposure: Dermal, inhalation, ingestion

Symptoms of exposure: Fatigue, weakness, dizziness, confusion, nausea, vomiting, diarrhea, blurred vision, headache, sweating, tearing, drooling, tunnel vision, twitching, difficulty breathing

Cholinesterase inhibitor: May impair the nervous system

PPE: Safety glasses, chemical resistant gloves, respirator with organic vapor cartridges and pesticide pre-filter

Signal words may include: **WARNING**,
DANGER

INSECTICIDE

CHLORFENAPYR

Non-restricted

Common names/brands: Phantom, Pylon, Pirate, Spectre

Description: White liquid

Found: On plants

Routes of exposure: Dermal, eyes, inhalation

Symptoms of exposure: Eye irritation, skin irritation, dizziness, nausea, vomiting, difficulty breathing, respiratory irritation

PPE: Safety glasses, chemical resistant gloves

Signal words may include: **CAUTION, WARNING**

CYHALOTHRIN

Non-restricted

Common names/brands:

Gamma-cyhalothrin, Lambda-cyhalothrin, Triazicide, Optimate, Demand, Karate, Warrior

Description: Colorless to beige; powder, pellets, liquid, small capsules

Found: On plants and ground

Routes of exposure: Dermal, inhalation

Symptoms of exposure: Eye irritation, skin tingling, burning, prickling feelings (particularly around the face), dizziness, headache, nausea, and fatigue

PPE: Safety glasses, chemical resistant gloves, dust mask



Signal words may include: **CAUTION**, **WARNING**, **DANGER**

CYPERMETHRIN

Non-restricted

Common names/brands:

Carex, Ammo, Cyperkill, Demon, Cyperfil, Cyper10

Description: Pale yellow; emulsifiable concentrate, wettable powder

Found: On plants

Routes of exposure:

Inhalation, dermal, ingestion

Symptoms of exposure: Skin tingling, burning and itching, eye redness and irritation, respiratory irritation, difficulty breathing

PPE: Safety glasses, chemical resistant gloves, dust mask



Signal words may include: **CAUTION**, **WARNING**, **DANGER**

DIAZINON

Non-restricted

Common names/brands: Diazinon Insect Spray, Lawn & Garden Insect Spray, Terminator, Compass

Description: Colorless to dark brown; dust, granules, spray, concentrate, seed dressings

Found: On plants

Routes of exposure: Dermal, inhalation, ingestion

Symptoms of exposure:

Fatigue, weakness, dizziness, confusion, nausea, vomiting, blurred vision, headache, sweating, tearing, drooling, tunnel vision, twitching, difficulty breathing

Cholinesterase inhibitor: May impair the nervous system

PPE: Safety glasses, chemical resistant gloves, respirator with organic vapor cartridges and pesticide pre-filter

Signal words may include: **CAUTION**, **WARNING**, **DANGER**



INSECTICIDE

NEONICOTINOID

IMIDACLOPRID

Non-restricted

Common names/brands:

Bayer Insect Disease & Mite Control, Quali-Pro, Admire Pro, Criterion

Description: Pale yellow; liquid, granules, dust

Found: On plants

Routes of exposure: Dermal, inhalation

Symptoms of exposure:

Skin irritation, eye irritation, headache, dizziness, difficulty breathing

PPE: Safety glasses, chemical resistant gloves, dust mask



Signal words may include: **CAUTION**, **WARNING**, **DANGER**

MALATHION



Non-restricted

Common names/brands:

Ortho-Malathion Plus,
Malathion Insect Spray, Bonide,
Southern Ag, Hi-Yield

Description: Yellow-brown
concentrate, oil solutions

Found: On plants

Odor: Garlic

Routes of exposure:

Dermal, inhalation, ingestion

Symptoms of exposure:

Fatigue, weakness, dizziness,

confusion, blurred vision, headache, sweating,
tearing, drooling, twitching, difficulty breathing

Cholinesterase inhibitor: May impair the
nervous system

PPE: Safety glasses, chemical resistant
gloves, respirator with organic vapor cartridges
and pesticide pre-filter

Signal words may include: **CAUTION,**
WARNING, DANGER

METHAMIDOPHOS

BANNED IN THE U.S.

Common names/brands:

Metamidofos, Monitor,
Tamaron, Filitox, Tamanox,
Metaldane 600, Bitrad

Description: White; soluble
and emulsifiable concentrate

Found: On plants

Routes of exposure: Dermal, inhalation,
ingestion

Symptoms of exposure: Fatigue, weakness,
dizziness, confusion, nausea, vomiting,
blurred vision, headache, sweating, tearing,
drooling, tunnel vision, twitching, abdominal
cramps, tremors, difficulty breathing

Cholinesterase inhibitor: May impair the
nervous system

PPE: Safety glasses, chemical resistant
gloves, organic vapor cartridge respirator with
pesticide pre-filters



Signal words may include: **WARNING**,
DANGER

METHOMYL

Restricted material (except as fly baits containing <1% methomyl)

Common names/brands: Lannate, Lanox, Nudrin, Orion, Scorpio, Dragon, Imtrade

Description: Pale yellow; liquid, granules, dust, wettable powder, emulsifiable and soluble concentrate, bait

Found: On plants

Routes of exposure: Dermal, inhalation, ingestion

Symptoms of exposure: Fatigue, weakness, dizziness, confusion, nausea, vomiting, blurred vision, headache, sweating, tearing, drooling, tunnel vision, twitching, difficulty breathing

Cholinesterase inhibitor. May impair the nervous system

PPE: Safety glasses, chemical resistant gloves, organic vapor cartridge respirator with pesticide pre-filters

Signal words may include: **CAUTION**,
DANGER

METHYL PARATHION

BANNED IN THE U.S.

Common names/brands: Merit, Metaphos, Metafos, Foldol

Description: White or brownish dust, wettable powder

Found: On plants

Odor: Garlic

Routes of exposure: Dermal, inhalation, ingestion

Symptoms of exposure: Fatigue, weakness, dizziness, confusion, nausea, vomiting, blurred vision, headache, sweating, tearing, drooling, tunnel vision, twitching, abdominal cramps, tremors, difficulty breathing

Cholinesterase inhibitor: May impair the nervous system

PPE: Safety glasses, chemical resistant gloves, organic vapor cartridge respirator with pesticide pre-filters

Signal words may include: **WARNING**, **DANGER**



INSECTICIDE

NEEM OIL

Non-restricted

Common names/brands:

Garden Safe, Safer,
Natria

Description: Yellow to brown liquid, granules, dust, wettable powder, emulsifiable concentrate

Found: On plants

Odor: Garlic-sulfur

Routes of exposure: Dermal, inhalation

Symptoms of exposure: Eye and skin irritation, nausea, vomiting, headache

PPE: Safety glasses, chemical resistant gloves, dust mask



Signal words may include: **CAUTION,**
WARNING

PROPOXUR

Non-restricted

Common names/brands: Baygon, Flycobait, Hockley, Mitoxur, FIGHTER, NOFLEE

Description: Pale yellow; emulsifiable concentrate, wettable powder, bait, dust

Found: Ground - surrounding grow

Routes of exposure: Dermal, inhalation, ingestion

Symptoms of exposure: Fatigue, weakness, dizziness, confusion, nausea, vomiting, blurred vision, headache, sweating, tearing, drooling, tunnel vision, twitching, pinpoint pupils, difficulty breathing

Cholinesterase inhibitor: May impair the nervous system

PPE: Safety glasses, chemical resistant gloves, organic vapor cartridge respirator with pesticide pre-filters

Signal words may include: **CAUTION**, **WARNING**, **DANGER**

INSECTICIDE

SPINOSAD

Non-restricted

Common names/brands: Antixx Fire Ant Bait, Ortho Ant Bait, Green Light, Entrust, Conserve

Description: Light gray to white; liquid, dust, granules, pellets, suspension

Found: On plants and ground

Routes of exposure: Dermal, inhalation

Symptoms of exposure: Difficulty breathing, headache, eye and skin irritation

PPE: Safety glasses, chemical resistant gloves, N95 filtering facepiece respirator

Signal words may include: **CAUTION**

MITICIDE

ETOXAZOLE

Non-restricted

Common names/brands: TetraSan, Zeal, Beethoven

Description: Brown; granules, aerosol, liquid

Found: On plants and ground

Routes of exposure: Dermal, inhalation, eyes

Symptoms of exposure: Eye, skin, respiratory tract, and digestive tract irritation, headache, dizziness, weakness, and nausea

PPE: Safety glasses, chemical resistant gloves, dust mask

Signal words may include: **CAUTION**

PLANT GROWTH REGULATOR

DAMINOZIDE

BANNED IN THE U.S.

Common names/brands: Alar, Kylar, B-NINE, Hi-Daminozide

Description: White; water soluble powder, liquid

Found: On plants

Routes of exposure: Dermal, inhalation

Symptoms of exposure: Eye irritation, skin irritation

PPE: Safety glasses, waterproof gloves, dust mask

Signal words may include: **CAUTION,**
DANGER

ALUMINUM PHOSPHIDE

Restricted material

Common names/brands:

Weevil-cide, Fastphos,
Fumitoxin, Phosfume,
Phostoxin, Max-Kill

Description: Gray/green/
yellow; pellets, tablets, dust

Found: Ground -
surrounding grow

Produces poisonous/ flammable phosphine gas when wet. Watch for water lines, ponds, and other wet areas

Odor: Garlic/decaying fish (phosphine)

Routes of exposure: Inhalation, ingestion

Symptoms of exposure: Chest tightness,
abdominal pain, headache, dizziness,
vomiting, difficulty breathing

PPE: Safety glasses, chemical resistant
gloves, respiratory protection approved
for phosphine gas

Signal words may include: **DANGER**



RODENTICIDE

BRODIFACOUM

Restricted material

Common names/brands: Talon-G, Final, Havoc, Rodex, Jaguar, Rodenthor

Description: Red/pink or blue/green pellets

Found: Ground - surrounding grow

Routes of Exposure: Dermal, inhalation, ingestion

Symptoms of exposure:

Anticoagulant: Can cause internal bleeding after multiple ingestions or inhalation of dust. Irritating to the eyes

PPE: Safety glasses, chemical resistant gloves, N95 filtering facepiece respirator



Signal words may include: **CAUTION**

BROMETHALIN

**Non-restricted
Common
names/brands:**

Real-Kill, TomCat,
Assault, Black Flag,
Cykill, Fastrac, Just
One Bite, Take Down,
Rampage

Description: Green;
paraffin blocks, bait
pellets

Found: Ground - surrounding grow

Routes of exposure: Dermal, ingestion,
inhalation, eyes

Symptoms of exposure: Numbness, eye
irritation, headache, confusion, personality
change, loss of coordination, tremors

Neurotoxin: May damage nervous system

PPE: Safety glasses, chemical resistant
gloves, N95 facepiece respirator



Signal words may include: **CAUTION,
WARNING**

RODENTICIDE

CHOLECALCIFEROL

Non-restricted

Common names/brands:

d-Con, Terad3

Description: Bait pellets and blocks

Found: Ground - surrounding grow

Routes of exposure:

Ingestion, inhalation, dermal

Symptoms of exposure: Nausea, vomiting, abdominal cramps

PPE: Safety glasses, chemical resistant gloves, N95 filtering facepiece respirator



Signal words may include: **CAUTION**



RODENTICIDE

DIPHACINONE

Non-restricted

Common names/brands: d-Con, Ditrac, Gopher Getter, TomCat, Ramik, Kaput, Top Gun, Bait Block

Description: Green bait

Found: Ground - surrounding grow

Routes of exposure: Dermal, inhalation, ingestion

Symptoms of exposure:

Anticoagulant: Can cause internal bleeding after multiple ingestions or inhalation of dust. Irritating to the eyes

PPE: Safety glasses, chemical resistant gloves, N95 filtering facepiece respirator

Signal words may include: **CAUTION**, **WARNING**, **DANGER**

STRYCHNINE



Non-restricted

Common names/brands: Cooke Gopher Mix, Gopher Getter Type 1, Martin's "Gopher Bait"

Description: Red, blue; grain-based bait or paste, liquid

Found: Ground - surrounding grow

Routes of exposure: Inhalation, ingestion

Symptoms of exposure:

Eye irritation, skin irritation, muscle spasms, agitation, restlessness, headaches, dizziness, seizures, difficulty breathing, nausea, vomiting

PPE: Safety glasses, chemical resistant gloves, N95 filtering facepiece respirator

Signal words may include: **WARNING**, **DANGER**

WARFARIN

Non-restricted

Common names/brands:

Warfarin Rat & Mouse Bait, Bonide Rat Magic, Kaput, Rodex Rat and Mouse Bait, Wilsarin Rat and Mouse Killer

Description: Green; dry or liquid bait, dust

Found: Ground - surrounding grow

Routes of exposure: Inhalation, ingestion

Symptoms of exposure:

Anticoagulant: Can cause internal bleeding after multiple ingestions or inhalation of dust. Irritating to the eyes

PPE: Safety glasses, chemical resistant gloves, N95 filtering facepiece respirator



Signal words may include: **CAUTION**, **WARNING**, **DANGER**

ZINC PHOSPHIDE

Restricted material

Common names/brands: Ratone, Mole Killer, Prozap, Ratnil, Ratbite, Vita, Ratkil, Ratox

Description: Brown; bait pellets or tablets, dust

Found: Ground - surrounding grow

Produces poisonous/flammable phosphine gas when wet. Watch for in water lines, ponds, and other wet areas

Odor: Garlic/decaying fish (phosphine)

Routes of exposure: Dermal, inhalation

Symptoms of exposure: "Feeling cold" all over, chest tightness, abdominal pain, headache, dizziness, blurred vision, fatigue, vomiting, difficulty breathing, skin irritation

PPE: Safety glasses, chemical resistant gloves, respiratory protection approved for phosphine gas

Signal words may include: **CAUTION, WARNING, DANGER**



CHEMICALS LISTED IN THIS GUIDE

Fungicides PP. 4-6

Ferric Sulfate
Paclobutrazol
Tebuconazole

Insecticides PP. 7-21

Bifenthrin
Carbaryl
Carbofuran
Chlorfenapyr
Cyhalothrin
Cypermethrin
Diazinon
Imidacloprid
Malathion
Methamidophos
Methomyl
Methyl Parathion
Neem Oil
Propoxur
Spinosad

Miticide P. 22

Etoxazole

Plant Growth Regulators PP. 5, 23

Daminozide
Paclobutrazol

Rodenticides PP. 24-31

Aluminum Phosphide
Brodifacoum
Bromethalin
Cholecalciferol
Diphacinone
Strychnine
Warfarin
Zinc Phosphide

If you have any questions or need more information, please contact your local County Agricultural Commissioner's office or contact DPR's Cannabis Program at: (916) 445-5010.

Input on this guide was provided by: California Department of Pesticide Regulation, California Department of Fish and Wildlife, California Department of Justice, and the California State Sheriffs' Association.

CANNABIS 01 1019



<https://www.cdpr.ca.gov/cannabis>

