

RESTRICTED USE PESTICIDE

Page 1 of 19

Due to very high acute toxicity to  
Humans and Birds

For retail sale to and use only by certified applicator or persons under their direct supervision and only for those uses covered by the certified applicator's certification. Direct supervision for this product is defined as the certified applicator being physically present during application, mixing, loading, repair and cleaning of application equipment. Commercial certified applicators must also ensure that all persons involved in these activities are informed of the precautionary statements.

HELENA  
PARATHION 8E  
Emulsifiable Insecticide Concentrate

ACTIVE INGREDIENTS

(By Weight)

Parathion (0,0-diethyl 0-p-nitrophenyl phosphorothioate)..... 77.93 %  
Related Compounds..... 2.46 %

INERT INGREDIENTS..... 19.61 %

TOTAL..... 100.00 %

One gallon of Helena Parathion 8E contains 8 pounds of Ethyl Parathion

POISON

See Side Panels  
for Antidote &  
Precautions



DANGER

Keep Out of  
Reach of  
Children

PELIGRO: AL USARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta la haya sido explicado ampliamente.

E.P.A. REG. NO. 5905-86

First letter of Product batch code indicates producing establishment.

5905-FL-1=TF • 5905-GA-1=CG • 5905-AR-1=WA • 5905-OK-1=AO • 5905-TX-2=AT  
5905-CA-1=KC • 5905-LA-3=DL

Manufactured by HELENA CHEMICAL COMPANY  
Memphis, Th. 38137

ACCEPTED  
NOV 9 1987  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 5905-86

Net Content:

# Precautionary Statements Hazards to Humans And Domestic Animals DANGER—POISON



**DO NOT SWALLOW**

## POISONOUS IF SWALLOWED

IF SWALLOWED - Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger or blunt object. Do not induce vomiting or give anything by mouth to an unconscious person. Get medical attention.



**DO NOT TOUCH**

## POISONOUS BY SKIN CONTACT

Poisonous if touched by hands or spilled or splashed on skin, in eyes or on clothing (liquid goes through clothes.)

## POISONOUS IF BREATHED

Breathing vapors, spray mist or dust may be fatal.



**DO NOT BREATHE**

### STATEMENT OF PRACTICAL TREATMENT POISONING SYMPTOMS

Parathion is a very dangerous poison. It rapidly enters the body by contact with all skin surfaces and eyes. Clothing wet with this material must be removed immediately. Exposed persons must receive prompt medical treatment or they may die.

Some of the signs and symptoms of poisoning are: Headache, nausea, vomiting, cramps, weakness, blurred vision, pin-point pupils, tightness in chest, labored breathing, nervousness, sweating, watering of eyes, drooling or frothing of mouth and nose, muscle spasms and coma.

Call a doctor (physician), clinic or hospital immediately. Explain that the victim has been exposed to parathion and describe his condition.

## ✚ FIRST AID TREATMENT ✚

Call a doctor (physician), clinic or hospital immediately. Explain that the victim has been exposed to parathion and describe his condition.

If breathing has stopped, start artificial respiration immediately and maintain until doctor sees victim.

If swallowed, drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. Get medical attention.

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. See doctor immediately.

## NOTE TO PHYSICIAN

Since any symptoms from absorption of this combination product are likely to be those of parathion intoxication, treatment should be directed towards the relief of cholinesterase inhibition.

Antidote — administer atropine sulfate in large doses, TWO to FOUR mg. intravenously or intramuscularly as soon as cyanosis is overcome. Repeat at 5 to 10 minute intervals until signs of atropinization appear. 2-PAM chloride is also antidotal and may be administered in conjunction with atropine. DO NOT GIVE MORPHINE OR TRANQUILIZERS.

Parathion is a strong cholinesterase inhibitor affecting the central and peripheral nervous systems and producing cardiac and respiratory depression. At first sign of pulmonary edema, the patient should be given

3 9 19

supplemental oxygen and treated symptomatically. Continued absorption of the poison may occur and fatal relapses have been reported after initial improvement. **VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS.**

Consult your State Agricultural Extension Service or Experiment Station regarding posting treated areas.

## **ENVIRONMENTAL HAZARDS**

This pesticide is highly toxic to fish and wildlife. Fish and other aquatic organisms may be killed at recommended application rates. Do not contaminate water by cleaning of equipment or disposal of waste.

This product is extremely toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow to drift to blooming crops or weeds if bees are visiting the treatment area.

ENDANGERED SPECIES RESTRICTIONS

The use of any pesticide in a manner that may kill or otherwise harm an endangered or threatened species or adversely modify their habitat is a violation of federal laws. The use of this product is controlled to prevent death or harm to endangered or threatened species that occur in the following countries or elsewhere in their range.

Before using this pesticide in these countries you must first obtain the Rangeland Endangered Species Bulletin and/or EPA Cropland Endangered Species Bulletin. The use of this pesticide is prohibited in these counties unless specified otherwise in the Bulletin. The EPA Bulletin is available from either your County Agricultural Extension Agent, the Endangered Species Specialist in your State Wildlife Agency Headquarters or the appropriate Regional Office of either the U.S. Fish and Wildlife Service (FWS) or the U.S. Environmental Protection Agency (EPA).

THIS BULLETIN MUST BE REVIEWED PRIOR TO PESTICIDE USE.

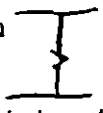
STATE (Regional office FWS) Species	County (unless otherwise specified)
ALABAMA (Atlanta, Ga.) Slackwater darter Alabama cavefish Freshwater mussels Snail darter Watercress darter	Lauderdale, Limestone, Madison Lauderdale Colbert, Jackson, Marshall, Morgan, Monroe Jackson, Madison Jefferson
ARIZONA (Albuquerque, N.M.) Arizona (Apache) trout Woundfin Bonytail chub Gila and Yaqui topminnow Masked bobwhite	Apache, Graham, Greenlee Mohave Mohave Cochise, Graham, Pima, Pinal, Santa Cruz Pima
ARKANSAS (Atlanta, Ga.) Freshwater mussels  Ozark cavefish Leopard darter	Clark, Clay, Cross, Lawrence, Randolph, Sharp, St. Francis Benton Sevier
CALIFORNIA (Portland, Or.) Delta green ground beetle Valley elderberry long-horn beetle Aleutian Canada goose Kern primrose sphinx moth Blunt-nose leopard lizard  Santa Cruz long-toed salamander Unarmored three-spine stickelback	Solano Merced, Sacramento  Colusa, Merced, Sutter, Stanislaus Kern Fresno, Kern, Kings, Madera, Merced Monterey, San Luis Obispo, Santa Barbara, Stanislaus, Tulare  Monterey, Santa Crus  Los Angeles, Santa Barbara

(Calif. cont.)

Owen River pupfish  
Paiute cutthroat trout  
Little Kern golden trout  
California Condor

Inyo, Mono  
Alpine, Madera, Mono  
Tulare  
Fresno, Kern, Kings, Los Angeles,  
Monterey, San Benito, San Luis Obispo,  
Santa Barbara, Tulare, Ventura

COLORADO (Denver, Co.)  
Colorado squawfish  
Humpback chub  
Bonytail chub  
Greenback cutthroat trout



Blanco, Delta, Garfield, Mesa, Moffat,  
Rio, Routt, Mesa  
Boulder, Larimer, Gilpin, Park, Fremont

FLORIDA (Atlanta, Ga.)  
Okaloosa darter  
Eastern indigo snake  
Everglade kite

Okaloosa, Walton  
Statewide  
Broward, Dade, Glades, Palm Beach

GEORGIA (Atlanta, Ga.)  
Snail darter  
Eastern indigo snake

Catoosa  
S.E. Georgia

HAWAII (Portland, Or.)  
Hawaiian goose

Islands of Maui, Hawaii

IDAHO (Portland, Or.)  
Whooping crane

Caribou, Bear Lake, Bonneville

KENTUCKY (Atlanta, Ga.)  
Kentucky cave shrimp  
Freshwater mussels

Edmundson, Hart  
Ballard, Edmundson, Jackson, Laurel,  
Marshall, McCracken, Pulaski, Rock-  
castle, Warren, Wayne

MARYLAND (Newton Corners, Ma.)  
Maryland darter

Harford

MISSISSIPPI (Atlanta, Ga.)  
Bayou darter  
Mississippi sand crane

Claiborne, Copiah  
Jackson

MISSOURI (Twin Cities, Mn.)  
Ozark cavefish

Christian, Greene, Jasper, Lawrence,  
Newton, Barry, Stone

NEVADA (Portland, Or.)  
Ash Meadows speckled dace  
Ash Meadows amargosa pupfish  
Devils Hole pupfish  
Warm Springs pupfish  
Woundfin  
Pahrangat bonytail  
Chi-ui  
Pahrump killifish

Nye  
Nye  
Nye  
Nye  
Clark  
Lincoln  
Washoe  
Clark, White Pine

NEW MEXICO (Albuquerque, N.M.)

Pecos gambusia  
Socorro isopod  
Gila trout  
Chihuahua chub  
New Mexican ridge-nose rattlesnake

Chaves, Eddy  
Socorro  
Catron, Grant  
Grant

Hidalgo

NORTH CAROLINA (Atlanta, Ga.)

Spotfin chub

Macon, Swain

OHIO (Twin Cities, Mn.)

Scioto Madtom

Champagne, Franklin, Logan, Madison,  
Pickway, Union

OKLAHOMA (Albuquerque N.M.)

Leopard darter  
Ozark cavefish

Leflore, Mccurtain, Pushmataha  
Deleware

OREGON (Portland, Or.)

Borax lake chub

Harney

Slackwater darter  
Slender chub  
Spotfin chub  
Snail darter

Lawrence, Wayne  
Clairborne, Hancock  
Cumberland, Fentress, Morgan  
Bradley, Hamilton, Knox, Loudon,  
Marion, Meigs, Polk

Freshwater mussels

Blount, Clairborne, Decatur, Franklin,  
Hancock, Hardin, Lincoln, Loudon,  
Marshall, Maury, Phea, Poane, Scott  
Sequatchie, Smith, Sullivan  
Clairborne, Hancock, Monroe

Yellowfin Madtom

TEXAS (Albuquerque, N.M.)

Fountain darter  
Pecos gambusia  
Leon Springs pupfish  
Clear Creek gambusia  
Texas blind salamander  
San Marcos salamander  
San Marcos gambusia  
Houston toad  
Attwater's greater prairie  
chicken  
Comanche Springs pupfish

Comal, Hays  
Jeff Davis, Pecos, Reeves  
Pecos  
Menard  
Hays  
Hays  
Hays  
Bastrop, Burleson

Aransas, Austin, Colorado, Fort-  
Bend, Jeff Davis, Goliad, Refugio,  
Reeves, Victoria, Pecos

UTAH (Denver, Co.)

Woundfin  
Humpback chub  
Bonytail chub  
Colorado squawfish

Desert Tortoise

Washington  
Grand  
Grand, Uintah  
Carbon, Duchesne, Emery, Garfield,  
Grand, Kane, San Juan, Uintah,  
Wayne  
Washington

VIRGINIA (Newton Corners, Ma.)

Slender chub  
Spotfin chub  
Yellowfin madtom  
Freshwater mussels

Lee, Scott  
Scott, Washington  
Lee, Russell, Scott  
Lee, Russell, Scott, Smyth, Tazewell,  
Washington, Wise

WYOMING (Denver, Co.)

Kendall Warm Springs dace  
Wyoming toad  
Whooping crane

Sublette  
Albany  
Lincoln, Sublette

# PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

## DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

### RE-ENTRY STATEMENT

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

Do not enter treated areas for 48 hours unless appropriate protective clothing is worn.

Protective clothing means, at least, a hat or other suitable head covering, a long sleeved shirt and long legged trousers or a coverall type garment (all of closely woven fabric covering the body, including the arms and legs), shoes and socks.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Inform workers of areas or fields that may not be entered without specific protective clothing, period of time field must be vacated and appropriate actions to take in case of accidental exposure. An example of such information is given under written warnings. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information:

### DANGER

Area treated with Ethyl Parathion on (insert date). Do not enter without appropriate protective clothing for 48 hours (insert State Department of Agriculture's re-entry interval, if more restrictive).

In case of accidental exposure to pesticide spray or dust, wash the skin thoroughly with soap and water. Remove contaminated clothing and wash before reuse. If in eyes, flush with plenty of water. If inhaled, go to an area where the pesticide has not been applied. Get medical attention if needed.

Reentry into apple, citrus, peach, nectarine or grape fields in the states of Arizona, California, Nevada, New Mexico, Oklahoma, Texas, and Utah is prohibited for seven days after the end of application, unless all protective clothing and equipment required for early re-entry as described elsewhere on the label is worn. Reentry into all other treated areas is prohibited for 48 hours after end of application, unless all required protective clothing and equipment is worn.



**WORK SAFETY RULES**

**THIS PRODUCT MAY BE FATAL IF SWALLOWED, INHALED, OR IF ALLOWED TO CONTACT SKIN. FAILURE TO PROPERLY FOLLOW ALL INSTRUCTIONS FOR PROTECTIVE CLOTHING AND EQUIPMENT WILL INCREASE YOUR RISK.**

**USE ONLY WHEN WEARING THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT DURING MIXING/LOADING, APPLICATION, REPAIR AND CLEANING OF APPLICATION EQUIPMENT, DISPOSAL OF PESTICIDE, AND EARLY REENTRY INTO TREATED FIELDS:**

**Waterproof pants and coat; heavy-duty chemical-resistant gloves; rubber boots or rubber overshoes; hood or wide-brimmed hat; safety goggles or face shield; NIOSH approved respirator. In addition, mixer/loaders must wear a chemical resistant apron when using the concentrated product. During aerial application in nonenclosed cockpits, a helmet with a visor may be substituted for the hood or wide-brimmed hat and safety goggles or face shield requirements.**

**IF MIXING/LOADING IS PERFORMED USING A CLOSED SYSTEM, THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT MAY BE WORN AS AN ALTERNATIVE:**

**Heavy-duty chemical resistant gloves; chemical resistant apron, long-sleeved shirt (or gauntlets and short sleeve shirt) and long-legged pants; shoes and socks.**

**Safety goggles or a faceshield must be worn when the system is under pressure. All other protective clothing and equipment required for use with open systems must be available nearby.**

**IF APPLICATION IS PERFORMED USING AN ENCLOSED CAB OR COCKPIT, THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT MAY BE WORN AS AN ALTERNATIVE:**

**Clean long-sleeved shirt and long-legged pants. All other protective clothing and equipment required for use during application must be available in the cab and must be worn when exiting the cab into treated areas. If used for this purpose, contaminated clothing may not be brought back into the cab unless in an enclosure such as a plastic bag.**

**REMEMBER- THIS CLOTHING IS NOT INTENDED TO PROTECT YOU DURING REPAIR AND CLEANING OF APPLICATION EQUIPMENT OR DURING EARLY REENTRY! REFER TO THE INSTRUCTIONS ABOVE.**

**HUMAN FLAGGERS ARE STRICTLY PROHIBITED DURING AERIAL APPLICATION.**

**IMPORTANT! If pesticide comes in contact with skin, wash off with soap and water, and contact a physician immediately. Always wash hands, face, and arms with soap and water before smoking, eating, drinking, or toileting.**

**AFTER WORK:** Wash gloves with soap and water before removing. Take off all work clothes and shoes. Store protective clothing separately from personal clothing. Launder protective clothing after each use. Shower using soap and water. Wear only clean clothes when leaving job. Do not wear contaminated clothing. Personal clothing worn during mixing/loading, application, repair and cleaning of application equipment, disposal of pesticide, and early reentry into treated fields must be stored and laundered separately from household articles. Clothing and equipment heavily contaminated or drenched with parathion must be destroyed according to state and local regulations.

**HEAVILY CONTAMINATED OR DRENCHED CLOTHING CANNOT BE ADEQUATELY DECONTAMINATED.**

Respirators should be cleaned and cartridges replaced according to instructions included with respirators. Replace gloves frequently.

## **Storage and Disposal**

### **Pesticide Storage**

Do not store below 20°F, (-7°C).

Do not use or store near heat, open flame or hot surfaces.

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call 901-761-0050.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

### **Pesticide Disposal**

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### **Container Disposal**

Metal containers- Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Plastic containers- Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## MIXING AND SPRAYING

Mix in water with agitation; agitate while spraying.  
Apply to row and field crops in 3 to 10 gals. (California only: use 20 to 100 gals.) of water per acre by ground spray rig or 1 to 3 gal. (California only: use 5 to 15 gals.) of water by airplane.

**COMPATIBILITY** — Avoid combinations containing highly alkaline materials such as lime-sulfur solutions or lime. Alkaline compounds will reduce the effectiveness of Parathion.

## WARNING

When used on citrus, peaches, nectarines or grapes, do not allow workers to enter treated area within 21 days to engage in any activity requiring substantial contact with treated foliage.

**ALFALFA, CLOVER, VETCH AND GRASS:** Aphids, Alfalfa weevil, Alfalfa caterpillar, Armyworm, Blister beetles, Clover leaf weevil— $\frac{1}{4}$  to  $\frac{1}{2}$  pint per acre. Alfalfa seed chalcid control on alfalfa grown for seed— $\frac{1}{4}$  to  $\frac{1}{2}$  pint per acre. Clover head weevil, Spider mites, Asiatic garden beetle and Green June beetle— $\frac{1}{2}$  pint per acre. Do not spray legumes during bloom period to avoid injury to honey bees. Do not apply within 15 days of harvest.

**ALMONDS:** Peach twig borer, San Jose scale, Olive scale, Mite eggs (Dormant Application)— $\frac{1}{2}$  pint plus dormant oil emulsion or dormant emulsive oil at the dosage recommended for the specific oil product per 100 gallons. Fruittree leafroller, Tent caterpillar, Peach twig borer— $\frac{1}{2}$  pint per 100 gallons of water. Do not apply after hulls open. Do not exceed 500 gallons of dilute spray per acre. Do not apply within 14 days of harvest. Do not feed treated hulls to livestock.

**ARTICHOKE:** Artichoke plume moth, Aphids—1 pint per acre. Do not apply within 7 days of harvest.

**APRICOTS:** Peach twig borer (Dormant Application)— $\frac{1}{2}$  pint plus dormant oil emulsion or dormant emulsive oil at the dosage recommended for the specific oil product per 100 gallons. Mealy bugs, Mealy plum aphid— $\frac{1}{4}$  pint per 100 gallons of water. Codling moth (for Codling moth control: apply at optimal fall and every 10 to 14 days thereafter until control is achieved), Orange tortrix, Peach twig borer— $\frac{1}{2}$  pint per 100 gallons of water. Do not apply within 14 days of harvest. Do not apply until danger of bee poisoning has passed. Do not exceed 700 gallons dilute spray per acre.

**AVOCADOS:** Avocado leafhopper— $\frac{1}{4}$  pint per 100 gallons of water. Do not apply within 21 days of harvest.

**BARLEY, OATS AND WHEAT:** Aphids (including Corn leaf aphid and Greenbug), Armyworm, Winter grain mite, Grasshoppers— $\frac{1}{4}$  to  $\frac{1}{2}$  pint per acre. Black grass bug, Stink bugs, Spider mites (including Brown spider mite), Leafhoppers, Cutworms— $\frac{1}{2}$  to  $\frac{3}{4}$  pint per acre. Chinch bug and False chinch bug— $\frac{1}{4}$  pint per acre. Thrips— $\frac{1}{4}$  to  $\frac{2}{5}$  pint per acre. Do not apply within 15 days of harvest.

BEST AVAILABLE COPY

12 919

**BEANS:** Aphids, Armyworm, Leafminers, Leafrollers, Leafhoppers, Mexican bean beetle—3/10 to 1/2 pint per acre. Red spider mite, Limbean pod borer—1/4 to 1/2 pint per acre. Cucumber beetles (Diabrotica spp.), Corn earworm—1/4 to 3/4 pint per acre. Whiteflies—1/2 pint per acre. Stink bugs—3/10 to 4/5 pint per acre. Thrips—1/4 to 2/5 pint per acre. Garden symphylan—2 1/2 quarts per acre. Spray broadcast on soil before planting and work into upper 6 inches by discing or rototilling. Preplant soil treatment only. Keep all persons and animals out of treated area for 48 hours. Do not contaminate ponds or streams. Do not apply within 15 days of harvest.

**BEETS, TABLE:** Aphids, Blister beetles, Leafhoppers, Webworms—1/2 pint per acre. Do not apply within 21 days of harvest if tops are to be used for food or feed, within 15 days of harvest if tops are to be discarded. Wireworms—1/2 gallon per acre. Spray broadcast on soil before planting and work into upper 6 inches by discing or rototilling. Pre-plant soil treatment only. Apply at least 1 to 2 weeks before planting. Keep all persons and animals out of treated area for 48 hours. Do not contaminate ponds or streams.

**BROCCOLI:** Armyworm, Diamondback moth, Imported cabbageworm—1/4 to 1/2 pint per acre. Climbing cutworms—1/2 pint per acre. Vegetable weevil—3/10 to 1/2 pint per acre. Aphids, Thrips—1/5 to 1/4 pint per acre. Cabbage looper—1/2 to 1 pint per acre. Do not apply to broccoli within 7 days of harvest.

**BRUSSELS SPROUTS:** Thrips, Aphids—1/5 to 1/4 pint per acre. Diamondback moth, Imported cabbageworm, Armyworm—1/4 to 1/2 pint per acre. Climbing cutworms—1/2 pint per acre. Vegetable weevil—3/10 to 1/2 pint per acre. Cabbage looper—1/2 to 1 pint per acre. Do not apply within 21 days of harvest.

**BLACKBERRIES, BOYSENBERRIES, DEWBERRIES, LOGAN-BERRIES, RASPBERRIES:** Aphids, Spider mites—1/4 to 1/2 pint per acre. Twospotted mite—1/5 to 2/5 pint per acre. Raspberry crown borer—1 pint per acre. Do not apply within 15 days of harvest.

**BLUEBERRIES:** Aphids, Blueberry maggot, Thrips—1/2 pint per acre. Do not apply within 14 days of harvest.

**CABBAGE, CAULIFLOWER:** Aphids, Thrips—1/5 to 1/2 pint per acre. Vegetable weevil—3/10 to 1/2 pint per acre. Diamondback moth, Armyworm, Imported cabbageworm—1/4 to 1/2 pint per acre. Do not apply to cabbage within 10 days of harvest; to cauliflower within 7 days of harvest. Wireworms—1 1/2 to 2 quarts per acre. Pre-plant broadcast soil treatment. Apply at least 1 to 2 weeks before planting. Incorporate into top 4 to 9 inches of soil immediately after application. Keep all persons and animals out of treated area for 48 hours. Do not contaminate ponds and streams. To control Cabbage seed pod weevil on cabbage grown for seed only, use 1 pint per acre. Symphylans—2 1/2 to 3 quarts per acre. Apply as a preplant treatment as for the wireworms.

**CARROTS:** Aphids, Petrobia mites, Vegetable weevil—1/2 pint per acre. Do not apply within 15 days of harvest. Do not use treated carrot tops for food or feed. Wireworms, Symphylans, Springtails—2 1/2 quarts per acre. Spray broadcasting—1/2 before planting and work into upper 6 to 9 inches by discing or rototilling. Pre-plant soil treatment only. Keep all persons and animals out of treated area for 48 hours. Do not contaminate ponds or streams.

**CELERY:** Aphids, Celery leaf-tier—1/5 to 1/2 pint per acre. Spider mites—2/5 to 4/5 pint per acre. Climbing cutworms—1/2 pint per acre. Leafhoppers—1/2 to 3/4 pint per acre. Cabbage looper—1/2 to 1 pint per acre. Leafminers, Whiteflies—1/4 pint per acre. Do

**BEST AVAILABLE COPY**

**CHERRIES:** Brown apricot scale. Aphids. San Jose scale. Black scale. Black cherry aphid eggs. Brown mite (Dormant Application)— $\frac{1}{4}$  pint plus dormant oil emulsion or dormant emulsive oil at the dosage recommended for the specific oil product per 100 gallons. Orange tortrix. Leafminers. Spider mites. Casebearer (during growing season). Black cherry aphid— $\frac{1}{4}$  pint per 100 gallons of water. Plum curculio. Cherry fruitworm. Oriental fruit moth. Eye spotted bud moth. Cankerworms. San Jose scale crawlers— $\frac{1}{4}$  pint per 100 gallons of water. Apply at petal fall and every 10 to 14 days thereafter until control is achieved. For San Jose scale crawlers, apply after emergence. Fruit flies— $\frac{1}{4}$  to  $\frac{1}{2}$  pint per 100 gallons of water. Apply at petal fall and every 10 to 14 days thereafter until control is achieved. Repeat immediately after every rain. For additional protection, use the same dosage in a post harvest spray. Shot-hole borer (following petal fall and in late summer)— $\frac{1}{4}$  pint per 100 gallons of water. Do not apply within 14 days of harvest. Do not exceed 400 gallons dilute spray per acre.

**CITRUS** (oranges, lemons, grapefruit): Mealybugs. (Purple Scale, Cottonsuction Scale — California only). Florida Red Scale and Snow Scale (excluding use in California)  $\frac{1}{3}$  pint per 100 gallons of water between June and September, or 3 ozs. per 100 gallons of water in two sprays (the first in the spring and a second between June and September). Use  $\frac{1}{4}$  to  $\frac{1}{2}$  pint per 100 gallons for control of Grasshoppers (excluding use in California). Do not apply more than 2 quarts of this material per acre. Do not apply within 14 days of harvest. Do not apply within 21 days of harvest in California.

**COLLARDS:** Armyworm. Climbing cutworms. Diamondback moth. Thrips. Aphids. Cabbage looper. Imported cabbageworm. Vegetable weevil— $\frac{1}{2}$  pint per acre. Do not apply within 10 days of harvest.

**CORN:** European corn borers (in the whorl)— $\frac{1}{2}$  pint per acre. Apply the first spray when 75% of the corn plants show "shot hole" feeding and follow with two additional sprays at 5- to 7-day intervals. Use sufficient water per acre to provide complete coverage and be certain whorls of plant are well-treated. Consult your State Agricultural Experiment Station for proper timing of treatments. Corn leaf aphid— $\frac{1}{4}$  pint per acre. Fall armyworm. Corn rootworm adults. Armyworm. Climbing cutworms. Grasshoppers. Japanese beetle— $\frac{3}{8}$  pint per acre. Corn earworm— $\frac{1}{2}$  to  $\frac{3}{4}$  pint per acre. Apply to silks as soon as they appear. Make 3 to 4 applications at 2- to 3-day intervals as infestation warrants. Re-apply immediately after rain. Stink bugs, Spider mites— $\frac{1}{2}$  pint per acre. Chinch bugs— $\frac{1}{4}$  pint per acre. Do not apply within 12 days of harvest.

**COTTON:** Aphids. Spider mites. Cotton leafworm. Cotton fleahopper. Garden webworm. Thrips— $\frac{1}{4}$  pint per acre. Cabbage looper— $\frac{3}{8}$  to  $\frac{1}{2}$  pint per acre. Stink bugs. Saltmarsh caterpillar— $\frac{1}{2}$  to 1 pint per acre. Cotton leafperforator. Lygus bugs. False chinch bug. Serpentine leafminer. Southern garden leathopper—1 pint per acre. Use enough water for complete coverage. Make first application when insects appear and repeat at 7-day intervals, if required. Workers entering fields within 24 hours after application should wear protective clothing. Do not handpick or harvest within 7 days.

**CRANBERRIES:** Sparganothis fruitworm. Cranberry tipworm. Cranberry fruitworm. Blackheaded fireworm. Leafhoppers— $\frac{1}{4}$  pint per acre. Do not apply within 15 days of harvest.

BEST AVAILABLE COPY

**CUCUMBERS, MELONS** (Cantaloupe, Muskmelon, Honeydew, Watermelon) OR **SQUASH** (summer, winter): Aphids, Stink bugs, Squash Vine Borer, Leafhoppers, Thrips — 1/2 pint per acre. Use 1/3 to 1/2 pint per acre for control of Cucumber Beetle, Melon Worm, Pickle Worm and Serpentine Leafminers. Squash bugs, Flea Beetles and Leafminers (cucumbers and squash only), Spider Mites (melons and cucumbers only) apply 1/2 pint per acre. Do not apply within seven days of harvest for melons. Make no application before cucumbers start to vine and do not apply within 15 days of harvest for both cucumbers and squash.

**CURRENTS:** Aphids—1/3 to 1/4 pint as leaf buds open in spring. Spider mites—1/4 to 1/2 pint before bloom. Do not apply within 30 days of harvest.

**EGGPLANT:** Aphids, Leafminers, Spider mites, Thrips, Whiteflies— 1/2 pint per acre in sufficient water for thorough coverage. Do not apply within 15 days of harvest.

**ENDIVE, (ESCAROLE):** Aphids, Leafhoppers—1/2 pint per acre. Do not apply within 21 days of harvest.

**FIGS:** Fig scale—1/2 pint per 100 gallons of water. Apply when insects appear and repeat as needed. For heavy infestations, oil may be added to the spray mixture. Follow directions on the oil label. Do not apply within 30 days of harvest.

**GARLIC:** Leafminers, Thrips, Brown wheat mite—1/2 pint per acre. Do not apply within 15 days of harvest.

**GRAPES:** Hoplia beetle, Grape leafroller, Thrips, Spider mites, Grape berry moth, Grape mealybug (Formant Application)—1/4 to 1 1/2 pints plus 2 gallons dormant oil emulsion per 100 gallons per acre. Apply 100 to 150 gallons spray solution per acre by ground sprayer. (Summer Application)—1/2 pint per 100 gallons per acre. Use 300 gallons spray solution per acre by ground sprayer in late June or early July. Do not apply within 15 days of harvest.

**HOPS:** Aphids—1/2 to 4/5 pint per acre. Spider mites—4/5 pint per acre. Do not apply within 15 days of harvest.

**KALE:** Aphids, Armyworm, climbing cutworms, Diamondback moth, Thrips, Cabbage looper, Imported cabbageworm, Vegetable weevil— 1/2 pint per acre. Do not apply within 10 days of harvest.

**KOHLRABI:** Armyworm, Climbing cutworms, Diamondback moth, Thrips, Vegetable weevil, Aphids, Cabbage looper, Imported cabbageworm— 1/2 pint per acre. Do not apply within 7 days of harvest.

**LETTUCE (Head, Bibb, Leaf):** Leafminers, Aphids, Banded cucumber beetle, Cabbage looper, Armyworm, Leafhoppers, Lygus bugs— 1/2 pint per acre. Do not apply within 7 days of harvest for head lettuce, or within 21 days of bibb and leaf lettuce.

**LETTUCE (Head):** Garden symphyla—2 1/2 quarts per acre. Spray broadcast on soil surface and work into top 6 to 9 inches by discing or rototilling. Pre-plant soil application only. Keep all persons and animals out of treated area for 48 hours. Do not contaminate ponds or streams.

**BEST AVAILABLE COPY**

(Refer to Cucumbers).

**MUSTARD GREENS:** Cabbage looper, Leafminers, Aphids, Climbing cutworms, Diamondback moth, Imported cabbageworm, Vegetable weevil, Armyworm, and Thrips—1/2 pint per acre in sufficient water for thorough coverage. Do not apply within 14 days of harvest.

**OKRA:** Aphids, Leafminers, Stink bugs—1/2 pint per acre. Do not apply within 21 days of harvest.

**OLIVES:** Olive scale, Black scale—3/5 to 4/5 pint per 100 gallons of water. Apply during the prebloom or postbloom stage, or when insects appear. Repeat as needed. Apply 1/2 pint per 100 gallons of water during postbloom state. Use with one gallon of light medium grade summer emulsive oil. Do not apply after August 1.

**ORZONS:** Leafminers, Thrips, Brown wheat mite—1/2 pint per acre. Do not apply within 15 days of harvest.

**ORNAMENTALS (Outdoor Only):** Aphids, Whiteflies, Spider mites, Leafhoppers, Thrips, Lace bugs, Bagworms, Cottonycusion scale—1/2 pint with 100 gallons of water and spray until runoff. For Spider mites and Leafhoppers, repeat in 7 to 10 days. Juniper webworm, Lecanium scale—2/5 pint with 100 gallons of water and spray until runoff. Mealybugs, Scales, Leaf-tiers—1/4 pint with 100 gallons of water and spray until runoff against young or ~~new~~ stages. Repeat in 3 weeks, if necessary. Spray foliage ~~thoroughly~~ thoroughly covered. **CHRISTMAS TREES**—to control Aphids ~~1/2 pint~~ 1/4 pint per 100 gallons of water.

**PEACHES, NECTARINES (For California):** San Jose scale, European fruit lecanium, Walnut scale, Olive scale, Peach twig borer (10 of mant Application)—1/2 pint plus dormant oil emulsion or dormant emulsive oil at the dosage recommended for the specific oil product per 100 gallons. Peach twig borer, Oriental fruit moth—1/2 pint per 100 gallons of water. For control of Oriental fruit moth apply at petal fall and every 10 to 14 days thereafter until control is achieved. Thrips (nectarines only)—1/4 pint per 100 gallons of water. Do not apply within 21 days of harvest. Do not apply more than 5 lbs. actual parathion per acre between January 1 and harvest. In California, do not apply more than once after bloom; do not exceed 250 gallons diluted spray per acre.

**PEACHES, NECTARINES (areas Other Than California):** Fruit tree leafroller, Cotton peach scale, Green peach aphid, Spider mites, Shothole borer (apply during peak adult beetle activity), Red-banded leafroller — 1/4 pint per 100 gallons of water. Plum curculio, Oriental fruit moth, Peachtree borer (apply spray to trunk of trees and time d with moth flights) Catfacing insects — 1/3 pint per 100 gallons of water. For Oriental fruit moth control, apply the spray at time of egg hatch of the broods. Use 2/5 pint per 100 gallons for control of San Jose Scale. Lecanium scale (apply after all eggs have hatched) — 3/8 pint per 100 gallons of water. Do not apply more than 5 pints of product per acre per year. Do not apply within 14 days of harvest.

**PEARS:** Pearleaf blister mite — 1/3 pint per 100 gallons of water in prebloom spray. Pear psylla—1/4 pint per 100 gallons of water in prebloom or postbloom sprays. Codling moth, Mealybugs, Woolly aphid, certain Spider mites—use dosages listed under APPLES. Injury may occur on Bosc variety. Do not apply within 14 days of harvest.

**PEAS, BLACK EYE:** Pea weevil, Thrips, Climbing cutworms, Army worm, Leafminers, Aphids—1/2 pint per acre. Do not apply within 15 days of harvest.

**PEAS, GARDEN:** Thrips, Climbing cutworms, Armyworm, Leafminers, Aphids, Pea weevil—1/2 pint per acre. Do not apply within 10 days of harvest. Do not use for feed or forage.

**PEANUTS:** Fall armyworm, Rednecked peanutworm—1/2 pint per acre. Lesser cornstalk borer—1/2 pint per acre (direct spray to soil surface and base of plants). Do not apply within 15 days of harvest.

**BEST AVAILABLE COPY**

**PEPPERS:** Aphids, Flea beetles, Leafminers, Thrips—½ pint per acre. Do not apply within 15 days of harvest.

**PLUMS, PRUNES:** Olive scale, San Jose scale, European fruit lecanium, Mealy plum aphid eggs, Leafcurl plum aphid eggs (Dormant Application)—½ pint plus dormant oil emulsion or dormant emulsive oil at the dosage recommended for the specific oil product per 100 gallons. Fruitree leafroller, Leafhoppers, Aphids, Spider mites, Thrips, Plum curculio, Peach twig borer, Codling moth—½ pint per 100 gallons of water. Eyespotted bud moth, Orange tortrix, Tussock moth—¼ pint per 100 gallons of water. Do not apply within 14 days of harvest. Do not apply more than 4 pints per acre.

**POTATOES:** Use 1/3 to ½ pint per acre for Aphids, Blister Beetles, Leaf Miners, Armyworms and Leaf footed Plant Bugs, Colorado potato beetle, Flea beetles, Grasshoppers, Whiteflies, Vegetable weevil, Leafhoppers, Thrips — ¼ to ½ pt. per acre. Stink bugs, Banded cucumber beetle, Loopers (including Cabbage looper) — 2/5 to ¼ pint per acre. Do not apply within 5 days of harvest. Garden symphylan—5 pints per acre. Broadcast spray on soil surface and work into top 6 to 9 inches by discing or retilling. Pre-plant soil application only. Keep all persons and animals out of treated area for 48 hours. Do not contaminate ponds or streams.

**PUMPKIN:** Aphids, Cucumber beetle, Squash bug — ½ pint per acre. Do not apply within 10 days of harvest.

**RADISHES:** Aphids, Leafminers, Thrips—½ pint per acre. Do not apply within 15 days of harvest.

**RICE:** Tadpole shrimp, Rice leafminer—1.6 Fl. oz. per acre. Do not apply within 1 day of harvest. Shrimp, crabs and crayfish may be killed. Do not apply where they are important resources. Do not apply within 14 days before or after an application of propanil. This product is to be applied by aircraft 5 to 10 gallons of water per acre. Restrict spill from rice fields for 2 days following application. Do not apply over canals or laterals.

**RUTABAGAS:** Aphids, Armyworm, Climbing cutworms, Diamondback moth, Vegetable weevil, Cabbage looper, Imported cabbage worm—½ pint per acre. Do not apply within 7 days of harvest.

**SAFFLOWER:** Aphids, Lygus bugs, Grasshoppers, Thrips—½ pint per acre. Do not apply after flowering.

**SORGHUM:** Sorghum midge—½ to 1 pint per acre (2 applications 3 to 5 days apart when approximately 90% of the heads have completely emerged from the boot or not later than start of blooming). Corn leaf aphid—¼ to ½ pint per acre. Mites—¼ to 1 pint per acre. Sorghum webworm, Corn earworm—¼ to ½ pint per acre. Fall armyworm—2/5 to ¼ pint per acre. Armyworm—2/5 to ½ pint per acre. Chinch bug—¼ pint per acre. Leaf injury may occur on some hybrid varieties of sorghum. Spray a few rows a week or so before booting to test effects on plants. Do not treat within 12 days of harvest or cutting for storage.

**SOYBEANS:** Webworm—¼ pint per acre. Velvetbean caterpillar, Green cloverworms, Twospotted spider mite, Stink bugs—½ pint per acre. Corn earworm, fall armyworm—½ to 4/5 pint per acre. White grubs, Wireworms—broadcast ½ gallon per acre just prior to planting and thoroughly incorporate into upper 4 to 6 inches of soil. Do not apply more than two applications per growing season. Do not apply within 20 days of grazing or harvest.

**BEST AVAILABLE COPY**



**SPINACH:** Cabbage looper, Leafminers, Vegetable weevils, Flea beetles, Seedcorn maggot on crown, Aphids, Crown mites.— ½ pint per acre. Do not apply within 14 days of harvest.

**SQUASH:** (Refer to Cucumbers).

**STRAWBERRIES:** Flea beetles, Field Crickets, Flower Thrips, Parnassia, Spider Mites, Aphids, Lygus bugs, Strawberry Leafroller, Strawberry Root Weevil, Whiteflies, ½ pint per acre. For Potato leafhopper — ¾ pint per acre. Do not apply within 15 days of harvest.

**SUGAR BEETS:** Alfalfa looper, Armyworm, Cutworms, Grasshoppers, Sugar beet webworm, Aphids, Leafminers, Lygus bugs, Blister beetles, Beet leafhopper, Beet crown borer, False celery leafhopper—½ to ¾ pint per acre. Do not apply within 15 days of harvest. Do not feed treated tops to dairy animals or animals being finished for slaughter. Garden symphylan—2½ quarts per acre. Spray broadcast on soil before planting and work into upper 6 inches by discing or rototilling. Pre-plant soil treatment only.

To control White grubs and wireworms, broadcast ½ gallon per acre just prior to planting and thoroughly incorporate into upper 4 to 6 inches of soil. Keep all persons and animals out of treated area for 48 hours. Do not contaminate ponds or streams.

**SUGARCANE:** Wireworms—use 1 quart in 10- to 12-inch band in open furrow at time of planting.

**SWEET POTATOES:** Aphids—½ pint per acre Leafminers—½ to ¾ pint per acre. Do not apply within 15 days of harvest.

**SWISS CHARD:** Aphids, Leafminers, Crown mite, Vegetable weevil, Seedcorn maggot in crowns—½ pint per acre. Do not apply within 21 days of harvest.

**TOBACCO:** Aphids, Stink Bugs, Tobacco Suckfly — ¼ pint per acre. For Green Peach Aphid use ¼ to 1/3 pint per acre in sufficient water for good coverage. Do not apply within five days of priming, or 15 days of cutting. Avoid plant juices coming in contact with the skin or other parts of the body of those who are engaged in cutting the crop.

**TOMATOES:** Aphids, Leafminers, Spider mites, Stink bugs, Colorado potato beetle, Flea beetles, Leafhoppers, Grasshoppers, Whiteflies, Thrips, Blister beetles—¼ to ½ pint per acre. Banded cucumber beetle, Loopers, Tomato russet mite, Plant bugs—½ pint per acre. Tomato psyllid—2/5 to ½ pint per acre. Vegetable weevil, Armyworm—½ to 1 pint per acre. Do not apply within 10 days of harvest.

**TURNIPS:** Aphids, Armyworm, Climbing cutworms, Diamondback moth, Thrips, Cabbage looper, Imported cabbageworm, Vegetable weevil—½ pint per acre. Do not apply within 10 days of harvest.

**WALNUTS:** Frosted scale, Lecanium scale (Dormant Application)—¼ to ½ pint plus dormant oil emulsion at the rate recommended for the specific oil product in 100 gallons of water per acre, applied by air blast; (Spring-Summer)—½ pint plus summer oil emulsion at the dosage recommended for the specific oil product in 100 gallons of water per acre applied by air blast sprayer. Putnam scale, San Jose scale (Dormant Application)—1¼ pint plus 8 gallons dormant oil emulsion in 200 gallons of water per acre applied by air blast sprayer. Do not apply after husks open.

**BEST AVAILABLE COPY**

**APPLES**

Aphids, European red mite, Twospotted spider mite	1/5 to 1/3 pint/100 gallons of water	For Aphids - apply during pre-pink stage, pink stage, petal fall, or when insects appear. Repeat at 10- to 14-day intervals or as needed.
Apple tree weevil, Oriental fruit moth	1/5 pint/100 gallons of water	For Oriental fruit moth - apply at petal fall and every 10 to 14 days thereafter until control is achieved.
Apple lace bugs	1/4 to 3/8 pint/100 gallons of water	
Apple red bugs, Eyespotted bud moth, Leafhoppers, Leafminers, Mites, Spider (including Clover mite, Pacific and Schoene spider mite and Wilt-mite mite)	1/5 to 1/4 pint/100 gallons of water	For Eyespotted bud moth - apply during prebloom, if control is not achieved by a regular spray program. For Leafminers - apply during the pre-pink or pink stage.
Bagworm, Japanese beetle	1/4 pint/100 gallons of water	
Codling moth, European apple sawfly, Fruit tree leafroller, Red-banded leafroller, Orange tortrix, Plum curculio, Scales (including Forbes scale, San Jose scale, and Scurfy scale), Shothole borer	1/4 to 1/3 pint/100 gallons of water	For Codling moth - apply at petal fall and every 10 to 14 days thereafter until control is achieved. For European apple sawfly - apply at petal fall. For Red-banded leafroller - apply during the pre-pink or pink stage. Repeat at 7 to 10 day intervals or as needed during the summer months. For Plum curculio - apply at petal fall and every 10 to 14 days thereafter until control is achieved. For Scales (including Forbes scale, San Jose scale and Scurfy scale) apply when crawlers are present. For Shothole borer - foliage and trunk application.
Grasshoppers	1/5 to 3/8 pint/100 gallons of water	
Mealybugs	1/4 to 1/2 pint/100 gallons of water	
<p><b>NOTE:</b> Parathion may injure the fruit and foliage of Golden Delicious, Jonathon, and McIntosh apples as well as related varieties, such as Cortland, Kendall, Macoun, and Melba.</p>		

**APPLES — For Aerial Application Only**

Aphids, Apple red bugs, Eyespotted bud moth, Grasshoppers, Mites, Spider (including Clover mite, Pacific and Schoene spider mite and Wilt-mite mite)	1 pint per acre	For aerial application only
Codling moth	1/5 to 1 pint/acre	For aerial application only. Apply at petal fall and every 10 to 14 days thereafter until control is achieved.
Fruit tree leafroller	1/5 to 1 pint/acre	For aerial application only
Red-banded leafroller	1 to 1 1/2 pint/acre	For aerial application only
Mealybugs, European red mite, Twospotted spider mite, Orange tortrix, Plum curculio, Scales (including Forbes scale, San Jose scale, Scurfy Scale)	1 pint/acre	For aerial application only. For Plum curculio - apply at petal fall and every 10 to 14 days thereafter until control is achieved.
<p><b>NOTE:</b> Parathion may injure the fruit and foliage of Golden Delicious, Jonathon, and McIntosh apples as well as related varieties, such as Cortland, Kendall, Macoun, and Melba.</p>		

**BEST AVAILABLE COPY**

19 of 17

CONDITIONS OF SALE - LIMITED WARRANTY  
AND LIMITATIONS OF LIABILITY AND REMEDIES

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Helena or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. Helena warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of Helena. Helena makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warrant shall be implied by law.

The exclusive remedy against Helena for any cause of action relating to the handling or use of this product is a claim for damage and in no event shall damages or any other recovery of any kind against Helena exceed the price of the product which causes the alleged loss, damage, injury, or other claim. Helena shall not be liable and any and all claims against Helena are waived, for special, indirect, incidental, or consequential damages or expense, of any nature, including, but not limited to, loss of profits or income, whether or not based on Helena's negligence, breach of warranty, strict liability in tort or any other cause of action.

Helena and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.