

# HELENA

## BRAND

ACCEPTED  
JUN 18 1973  
5965-196

**CYTHION**<sup>®</sup>  
THE PREMIUM GRADE MALATHION

ACTIVE INGREDIENT:  
\*Malathion ----- 56.44%  
INERT INGREDIENTS: ----- 43.56%  
TOTAL-----100.00%

\*(O,O-Dimethyl Dithiophosphate of Diethyl Mercaptosuccinate)  
\*Also known as Cythion.

(ONE GALLON OF CYTHION<sup>®</sup> CONTAINS 5 POUNDS OF MALATHION)

**C A U T I O N** KEEP OUT OF REACH OF CHILDREN.  
SEE OTHER CAUTIONS ON SIDE PANEL.

COMBUSTIBLE  
KEEP AWAY FROM OPEN FLAME  
DO NOT REUSE CONTAINER FOR ANY PURPOSE

Trademark Agricultural Division American Cyanamid

EPA REG. NO. 5905-196

MANUFACTURED BY  
**HELENA CHEMICAL COMPANY**  
MEMPHIS, TENNESSEE

## NOTICE

Please find directions for use in envelope attached to top of drum.

### READ ENTIRE LABEL BEFORE USING

### C A U T I O N

### POISONOUS TO FISH AND WILDLIFE

**CAUTION:** When sprayed in ship's hold, wear respirators approved by the U.S. Bureau of Mines to prevent breathing of fumes or mist into throat and lungs. Wear protective clothing to prevent as much of the skin as possible from exposure.

This product is toxic to fish. Keep out of lakes, streams, or ponds. Do not apply where runoff is likely to occur. Do not apply where weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment, or disposal of wastes. Apply this product only as specified on this label.

This product is highly toxic to bees exposed to direct treatment or residues on crops. Protective information may be obtained from your Cooperative Agricultural Extension Service.

Harmful if swallowed. Avoid breathing of spray mist. Avoid contact with skin. Wash thoroughly with soap and water after using. Remove contaminated clothing immediately. Keep out of reach of children. Do not use on animals. Do not contaminate feed or foodstuffs. This product should not be used for any purpose other than that suggested on the label.

Do not apply this product where there may be grazing by dairy animals or animals being finished for slaughter.

Keep all unprotected persons out of the operating area or vicinity where there may be danger of drift.

### NOTE TO PHYSICIAN

Atropine is antidotal. 2-PAM is also antidotal and may be administered in conjunction with atropine.

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#### NOTE TO PHYSICIAN

Atropine is antidotal. 2-PAM is also antidotal and may be administered in conjunction with atropine.

#### NOTICE OF WARRANTY

Helena Chemical Company warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use and Conditions of Sale, subject to the inherent risks referred to therein.

Helena Chemical Company makes no other express or implied warranty, including any other express or implied warranty of FITNESS or of MERCHANTABILITY, and no agent of Helena Chemical Company is authorized to do so except in writing, with a specific reference to this warranty. Any damages arising from a breach of this warranty shall be limited to direct damages, and not include consequential commercial damages such as loss of profit or value, etc.

<b>ACCEPTED</b>
NET CONTENTS
6-18-73
UNDER THE FEDERAL INSECTICIDE FUNGICIDE AND RODENTICIDE ACT OF 1947, THIS PRODUCT IS REGISTERED UNDER NO. 5905-196



**Grasshoppers\*** 1 1/2 pts.  
 \*make full coverage to hatching areas when nymphs are young.

**Armyworms** 2 pts.

(POST-HARVEST STORAGE TREATMENT ONLY)

**NON-AGRICULTURAL LANDS** (wastelands, roadsides, soil bank lands not to be grazed)

Grasshoppers 1 1/2-3 pts. OF  
 1 1/2-3 pts. in  
 1 gal. diesel fuel oil.\*

\*Apply by aircraft or turbine-blower sprayer. Repeat applications may be needed after hatching and before movements of crops take place.

STORED GRAIN		
Wheat, Oats	Confused flour beetle	1 pt. per 100 bu.
Rice, Corn	Rice weevil	in 2-5 gals. water
Rye, Barley	Granary weevil	
Grain Sorghum	Saw-toothed grain beetle	
Field or Garden Seeds	Flat grain beetle	
	Red flour beetle	
	Lesser grain borer	
	Indian meal moth	

Peanuts (Stored unshelled) For protection against insects listed above in STORED GRAINS.

Apply CYTHION the Premium Grade Malathion 56.44% Emulsifiable Liquid as follows:

**Residual Warehouse Spray - Before Storing Peanuts:**  
 Clean warehouse thoroughly of trash and old remains of peanuts 1 to 2 weeks before new peanut crop is stored. Thoroughly spray with sufficient pressure interior of empty warehouse (including cracks and protected places) outside walls to height of 20 ft., and the ground to a distance of about 2 ft. from warehouse by diluting 1 pt. of 56.44% Premium Grade EC in sufficient water to make 100 gal. of spray or 1 gal. with 19 gals. of water. Apply finished spray at the rate of 2 gals. per 100 sq. ft. or to runoff.

**Bulk Spray Treatment - Peanuts Going into Storage:**  
 Apply 56.44% Premium Grade EC in 5 gals. of water per 10 tons of "currier" stock peanuts as they go into storage. Apply coarse spray uniformly. Preferably use a suitable mechanical spray applicator which regulates rate of application to flow of peanuts. Otherwise, adjust pressure and size of nozzle opening to rate of flow of peanuts.

**ACCEPTED**  
 6-18-73  
 5905-196  
 UNDER THE FEDERAL INSECTICIDE CONTROL ACT  
 FOR ECONOMIC PESTION REGISTER

**CYTHION 56.44% Emulsifiable Liquid**  
 Grasshoppers 1 1/2-2 pts.  
 DO NOT APPLY WITHIN 3 DAYS OF HARVEST.

**SOYBEANS** Max. soy bean beetle 1 1/2-2 pts.  
 DO NOT APPLY WITHIN 1 DAY OF HARVEST.

**SUGAR BEETS** Aphids 1 1/2-2 pts.  
 Spider mites 1 1/2-2 pts.  
 Grasshoppers 1 1/2 pts.

DO NOT APPLY WITHIN 7 DAYS OF HARVEST.

**TOBACCO** Aphids 1 1/2-2 pts.

**WETCH** Pea aphid 1 1/2-2 pts.  
 Wetch or cold 1 1/2-2 pts.

DO NOT APPLY WITHIN 7 DAYS OF HARVEST OR PASTURING.

**ALFALFA** Aphids  
 Potato leafhopper  
 Spider mites  
 Alfalfa weevil larvae  
 Spittlebug 1 1/2-2 pts.  
 Grasshoppers 1 1/2-2 pts.  
 Spotted alfalfa aphid 1 1/2-2 pts.  
 Clover leaf weevil 1 1/2 pts.  
 Red aphid 1 pt.  
 Lygids bug 1 1/2-2 pts.  
 Armyworms 2 pts.

DO NOT APPLY WITHIN 7 DAYS OF HARVEST.

**ASPARAGUS** Asparagus beetle 2 pts.  
 Fleas 1 1/2-2 pts.

DO NOT APPLY WITHIN 1 DAY OF HARVEST.

**BEANS** Mexican bean beetle 1 1/2 pts.  
 Green, navy, red kidney, wax, cowpeas, black-eyed peas  
 Spider mites 1 1/2 pts.  
 Japanese beetle 1 1/2-2 pts.  
 Aphids  
 Bean beetle 2 pts.

Make 2 or more applications as needed.  
 DO NOT APPLY WITHIN 1 DAY OF HARVEST.

**BEANS** Aphids 1 1/2-2 pts.

California  
 Northwest

DO NOT APPLY WITHIN 1 DAY OF HARVEST.

**CROPS AND VEGETABLES**  
 Broccoli, cauliflower, Brussels sprouts, cabbage, collards, lettuce, spinach, Swiss chard, watercress

APPLY WITHIN 7 DAYS OF HARVEST FOR control of cabbage loopers, worms, and diamondback moths.  
 Parsley DO NOT APPLY WITHIN 21 DAYS OF HARVEST. CYTHION should be used in combination with other recommended insecticides.

DO NOT APPLY WITHIN 3 DAYS OF HARVEST.  
 Squash

**Alfalfa looper\***  
 \*For control of loopers, CYTHION should be used in combination with other recommended insecticides.

Aphids  
 Spider mites 1 1/2 pts.  
 Pickleworm 2 pts.  
 Squash vine borers

DO NOT APPLY UNLESS PLANTS ARE DAMAGED.

DO NOT APPLY WITHIN 1 DAY OF HARVEST.

**COOPLANT** Aphids  
 Spider mites 1 pt.  
 Leaf bug 1 pt.

APPLY UNIFORMLY OVER SOIL AROUND BASE OF PLANT.  
 DO NOT APPLY WITHIN 3 DAYS ON GREEN ONIONS.

**GARLIC LEEKS** Aphids  
**SHALLOTS** Aphids 1 1/2-2 pts.

APPLY UNIFORMLY OVER SOIL AROUND BASE OF PLANT.  
 DO NOT APPLY WITHIN 3 DAYS OF HARVEST.

**MUSHROOMS** Mites 2 1/2 pts. per 100 sq. ft. of bed.

Short & solaric flies 2 1/2 pts. per 100 sq. ft. of bed.

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of superior oil per 100 gals. of water. MAKE FULL COVERAGE DORMANT OR DELAYED DORMANT SPRAYS ONLY.

<b>APRICOTS</b>	Codling moth	
	Orange tortrix	
	Pecan scale	
	Soft brown scale	
	Aphids	1 1/2 pts.

(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)

<b>AVOCADOS</b>	Etania scale	
	Greenhouse thrips	
	Convergent hopper	
	Orange tortrix	
	Soft brown scale	1 1/2 pts.

(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)

<b>CHERRIES</b>	Black cherry	
	aphid	1 1/2 pts.
	Fruit tree leaf roller	1 1/2 pts.
	Cherry fruit fly	1 pt.
	Bud moth	1 pt.

INJURY MAY OCCUR ON CERTAIN VARIETIES OF SWEET CHERRIES PARTICULARLY IN THE NORTHWEST. (DO NOT APPLY WITHIN 3 DAYS OF HARVEST. MAY INJURY FOLIAGE ON SOME VARIETIES.)

CITRUS - (CONSULT LOCAL SPRAY SCHEDULES FOR RECOMMENDED VOLUMES OF SPRAY PER ACRE.)

<b>Grapefruit</b>	California red scale	
<b>Lemons, Limes, Oranges, Tangerines.</b>	Yellow scale	
	Purple scale	
	Black scale	
<b>Tangelos, Kumquats</b>	(single & off brooded)	
	Soft scale	
	Citricola scale	1-1 1/2 pts.

(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)

<b>FIGS</b>	Dried fruit	3 gals. plus
	Beetles	1-2 gals.
	Winegar beetles	unsulfurized molasses per acre

(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)

NOTE: RATES PER ACRE IN SUFFICIENT WATER FOR THOROUGH COVERAGE. INJURY MAY OCCUR ON GRAPES OF RIBISTE, ITALIA, CARDINAL AND ALBERCA VARIETIES WHEN SPRAYS CONTAINING LYTHION ARE APPLIED NEAR THE CLUSTERS APPROPRIATE.

<b>OVERWINTERING</b>	Overwintering	
<b>GRAPE VINES</b>	Grape phylloxera*	

\*For the control of overwintering grape phylloxera on nursery stock grape vines, remove excess soil from the roots and dip in a solution made up of 1 to 1 1/2 pints of EMULSION\* emulsifiable liquid in 50 gallons of water. Submerge the entire root system in the solution for 3 minutes. Keep the solution agitated at all times. Fifty gallons of solution will treat approximately 100 nursery stock grape vines.

(DO NOT APPLY WITHIN 3 DAYS OF HARVEST. EMULSION MAY CAUSE INJURY TO FOLIAGE ON SOME VARIETIES.)

<b>QUINCES</b>	Plus curculio	
	Codling moth	
	Oriental fruit moth	2 pts.
	Forbes scale	1 pt.
	Mites	1-2 pts.

(DO NOT APPLY WITHIN 3 DAYS OF HARVEST.)

<b>BLACKBERRIES</b>	Mites	
<b>BOYSBERRIES</b>	Thrips	
<b>DEWBERRIES</b>	Leafhoppers	1 1/2 pts.
<b>LOGANBERRIES</b>	Japanese beetle	1 1/2 pts.
<b>RASPBERRIES</b>	Aphids	
	Rose scale	3 pts.

(DO NOT APPLY WITHIN 1 DAY OF HARVEST.)

<b>RASPBERRIES</b>	Saw beetle	1 1/2-2 pts.
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(DO NOT APPLY WITHIN 1 DAY OF HARVEST.)

<b>BLUEBERRIES</b>	Blueberry maggot*	
*Blueberry maggots in the Northeast: 1 pt. of 57% emulsifiable liquid plus 1 1/2 pts. of Staley's Sauce Base #7 in 100 gals. of water per acre and apply by ground or air equipment. Preharvest interval - 8 hours.		
<b>BLUEBERRIES</b>	Japanese beetle	1 1/2 pts.

<b>CRANBERRIES</b>	Leafhoppers	
	Black-headed fireworm	1 1/2 pts.
	Spittlebug nymphs	
	Cranberry fruit-worms	1 1/2 pts.

DO NOT APPLY CLOSE TO OR DURING THE BLOOM OR BERRY-SET PERIOD. DO NOT APPLY WHEN FOLIAGE IS WET.

<b>STRAWBERRIES</b>	Aphids	
	Spider mites	1 1/2 pts.
	Strawberry root weevil	1 1/2 pts.

\*Apply to soil surface before planting and work into top 3 to 5 inches.

	Lygus bugs	
	Spittlebugs	
	Field crickets	
	Thrips	1 1/2-3 pts.
	Potato leafhopper	
	Strawberry leaf-roller	
	Whiteflies	1 1/2-2 1/2 pts.

(DO NOT APPLY WITHIN 3 DAYS OF HARVEST.)

<b>ALMONDS*</b>	Aphids	
	Red Spiders	1-2 pts.
	Peanut root borer	1-1 1/2 pts.

\*No more than 3 lbs. of actual EMULSION\* per acre should be applied to almond trees.

<b>PEACHES</b>	Spider mites	
	Aphids	1-2 pts.
	Peanut	
	Cherry	1-2 pts.
	Peanut phylloxera	
	Peanut case	
	Beetle	1-1 1/2 pts.
	Beetle	1-1 1/2 pts.

for good coverage.	
<b>GREENHOUSE</b>	Millipedes
(in and around greenhouses and gardens)	Springtails
	Sowbugs
	SEE NOTE

NOTE: Mix 1 teaspoonful of 57% E. L. in 1 gal. of water and apply to 150 square feet of soil surface or where insects congregate or apply dust at the rate of 1 lb. per 150 square feet of soil surface or where insects congregate. Repeat at 7 to 10 day intervals as needed.

## READ ENTIRE LABEL BEFORE USING CAUTION POISONOUS TO FISH AND WILDLIFE

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WARRANTY AND LIMITATION OF DAMAGES. Helena Chemical Company warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes recited to in the Directions for use and conditions of sale, subject to the inherent risks referred to herein. Helena Chemical Company makes no other express or implied warranty, and disclaims any other express or implied warranty or fitness for any purpose. HELENA CHEMICAL COMPANY'S LIABILITY, and no part of Helena Chemical Company is authorized to do so except in accordance with specific reference to this warranty. No damages arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or value, etc.

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