

5905-196

3-3-73

Best Available Copy

HELENA

BRAND

CYTHON[®]

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 CYTHON[®] CONTAINS 5 POUNDS
OF MALATHION)

CAUTION KEEP OUT OF REACH OF CHILDREN.
SEE OTHER CAUTIONS ON SIDE PANEL.

Harmful if swallowed. Avoid breathing of spray mist.
Avoid contact with skin. Wash thoroughly with soap and
water after using. Remove contaminated clothing imme-
diately. 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.

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

Wess Helena, Ark. — Tampa, Fla. — Lubbock, Texas

Des Moines, Iowa — West Columbia, South Carolina

	PEST	APPLICATION RATES
PEPPERS	Aphids	1 pt.
	Pepper maggots	2 1/2 pts.
(DO NOT APPLY WITHIN 3 DAYS OF HARVEST.)		
POTATOES	Aphids	1 pt.
	Leafhoppers	1 pt.
	False chinch bugs	1 1/2 pts.
	Mealybugs	1 pt.

Beets*	ROOT CROPS	14-2 pts.
	Aphids	14-2 pts.
	*if tops are to be used as feed	
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		
Carrots	Aphids	14-2 pts.
	Leafhoppers	2 1/2 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		

Horseradish	Aphids	14-2 pts.
Parsnips	Aphids	14-2 pts.
APPLY UNIFORMLY OVER SOIL AROUND BASE OF PLANTS.		
Radishes	Aphids	14-2 pts.
Salsify	Aphids	14-2 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		
Rutabagas	Aphids	14 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		
Sweet potatoes	Leafhoppers	14-2 pts.
	Morning-glory	
	Leafminers	2 1/2-3 pts.
(DO NOT APPLY WITHIN 3 DAYS OF HARVEST.)		

APPLES	Woolly apple aphid	
	Bud moth	1 pt.
	Green apple aphid	1 1/2 pts.
	Rosy apple aphid	1 1/2 pts.
	Mealy bug	1-2 pts.
	Codling moth	
	Plum curculio	
	Red-banded leaf	
	roller	2 pts.

(DO NOT APPLY WITHIN 3 DAYS OF HARVEST. MAY IN-
JURE FOLIAGE ON SOME VARIETIES.)

APPLES	Forbes scale	1 pt.
*Consult local spray schedules for recommended combinations of CYTHON [®] with other insecticides for control of insect complex on apples. CYTHON [®] EMULSIFIABLE LIQUID MAY CAUSE INJURY TO MC INTOSH AND REDLAND VARIETIES.		

APPLES	Woolly apple aphid	
	Green apple aphid	
	Rosy apple aphid	
	Mites	1 pt.
	Red banded leaf	
	roller	

*1 pint of 57% emulsifiable liquid plus 1 gallon
of superior oil per 100 gals. of water. MAKE
FULL COVERAGE DORMANT OR DELAYED DORMANT SPRAYS
ONLY.

APRICOTS	Codling moth	
	Orange tortrix	
	Terrapin scale	
	Soft brown scale	
	Aphids	14-2 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		

AVOCADOS	Latania scale	
	Greenhouse thrips	
	Omnivorous looper	
	Orange tortrix	
	Soft brown scale	1 1/2 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		

CHEERRIES	Black cherry	
	aphid	1 1/2 pts.
	Fruit tree leaf	
	roller	1 1/2 pts.
	Cherry fruit fly	
	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 RECOM- MENDED VOLUMES OF SPRAY PER ACRE.)		
Grapefruit	California red scale	
Lemons, Limes,	Yellow scale	
Oranges,	Purple scale	
Tangerines,	Black scale	
Tangelos,	(single & off	
Kumquats	brooded)	
	Soft scale	
	Citricola scale	1-1 1/2 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		

FIGS	Dried fruit	2 qts. plus
	beetles	1-2 qts.
	Vinegar beetles	unsulfurized
		molasses per
		acre

(DO NOT APPLY WITHIN 3 DAYS OF HARVEST.)

NOTE: RATES PER ACRE IN SUFFICIENT WATER FOR
THOROUGH COVERAGE. INJURY MAY OCCUR ON GRAPES
OF BINGER, ITALIA, CARDINAL AND ALMERA VAR-
IETIES WHEN SPRAYS CONTAINING CYTHON[®] ARE AP-
PLIED AFTER THE CLUSTERS APPEAR.

NURSERY STOCK Overwintering

GRAPE VINES 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 CYTHON[®] emulsifiable liquid in
50 gallons of water. Submerge the entire root
system in the solution for 5 minutes. Keep the
solution agitated at all time. Fifty gallons
of solution will treat approximately 500 nursery
stock grape vines.

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

Best Available Copy

CROP		PEST	RATES	
CLAYTON		Aphids	14-2 pts.	
		Mites	14-2 pts.	
		Grasshoppers	14-2 pts.	
		Leafhoppers	14-2 pts.	
		Clover leaf weevil	14-2 pts.	
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST)				
GRASS CROPS				
Grass &	Grasshoppers		14-2 pts.	
Grass Hay			OR 14 pts. in 1 gal. diesel fuel oil.*	
			oil.*	
		Aphids	14-2 pts.	
		Leafhoppers	OR 14 pts. in 1 gal. diesel fuel oil.*	
			oil.*	
		Armyworms	2 pts. OR 14 pts. in 1 gal. diesel fuel oil.*	
			oil.*	
*Apply by aircraft or turbine-blower sprayer.				
Pasture & Range				
Grass	Grasshoppers		14-2 pts.	
			OR 14 pts. in 1 gal. diesel fuel oil.*	
			oil.*	
		Aphids	14-2 pts.	
		Leafhoppers	14-2 pts. OR 14 pts. in 1 gal. diesel fuel oil.*	
*Apply by aircraft or turbine-blower sprayer.				
Barn grass				
Canary grass				
Fescue				
Orchard grass				
Red top				
Timothy				
Yellow foxtail				
GRAIN CROPS				
Barley, Corn, Oats, Wheat	Cereal leaf beetle		1-14 pts.	
		(POSTHARVEST STORAGE TREATMENT ONLY.)		
		English Grain aphid	14-2 pts.	
		Greenbugs	14-2 pts.	
		Grasshoppers*	14 pts.	
*make full coverage to hatching areas when nymphs are young.				
ARMYWORMS				
(POSTHARVEST STORAGE TREATMENT ONLY.)				
NON-AGRICULTURAL LANDS (Wastelands, roadsides, soil bank lands not to be grazed)				
*Apply by aircraft or turbine-blower sprayer. Repeat applications may be needed after hatching and before movements to crops take place.				
STORED GRAIN				
Wheat, Oats, Rice, Corn, Rye, Barley, Grain Sorghum, Field or Garden Seeds.	Flat grain beetle	Confused flour beetle	1 pt. per 1000 bu.	
		Rice weevil	in 2-5 gals. water	
		Grainary weevil		
		Saw-toothed grain beetle		
		Lesser grain borer		
		Indian meal moth		

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

Apply CYTHION 56.44% 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 2 to 8 ft., and the ground to a distance of about 6 ft. from warehouse by diluting 1 pt. of 56.44% Premium Grade EC in sufficient water to make 2 1/2 gals. of spray or 1 gal. with 19 gals. of water. Apply finished spray at the rate of 2 gals. per 1000 sq. ft. or to runoff.

Pre-Treatment - Peanuts Going into Storage: 1/2 pt. of 56.44% Premium Grade EC in 5 gals. of water per 10 tons of farmers' 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.

CROP	PEST	APPLICATION RATES
Supplemental Surface Spray: After warehouse has been filled, level surface of contents before spraying. Apply surface spray using 1-3/4 lbs. of Fenitrothion Grade 50 which is 25.6 WP in 2 pints, of water and apply at the rate of 2 gals. per 100 sq. ft. of surface. Apply first treatment as soon as bin is filled and leveled, but not later than the first week in October. Apply the second surface treatment 1 month later, followed by treatments at 2 month intervals. Use a piston type motor sprayer equipped with agitator and nozzle capable of delivering a coarse spray. Repeat surface application 60 days later if warm temperatures prevail. Otherwise, delay further treatment until late winter.		
NOTE: Both EC and WP are to be used in the full program. Labels for EC should refer also to the WP part of the program, and vice-versa.		
For a residual wall, floor, and machinery spray in grain elevators, in treating truck beds, box cars, and ships holds before loading grain, apply 1 gallon of CYTHION® per 25 gallons water, making thorough application		
COTTON	Boll weevil	1-2 gts.
	Desert spider mite	
	Cotton aphid	
	Leafhoppers	
	White flies	
	Cotton leafworm	
	Cotton leaf perforators	
	Thrips	
	Lygus bugs	1-2 gts.
	Flea-hoppers	• 1-14 pts.
	Full armyworms	
	Grasshoppers	
	Garden webworms	14-3 pts.
MINT	Aphids	
	Spider mites	
	Leafhopper	14 pts.
	Adult flea beetle	
	Caterpillars	14 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		
PEANUTS	Thrips	14 pts.
(DO NOT APPLY WITHIN 10 DAYS OF HARVEST.)		
RICE	Rice leaf miner	24 pts.
	Rice stalk bug	1-14 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		
SAFFLOWER	Aphids	
	Lygus bugs	
	Grasshoppers	14-2 pts.
(DO NOT APPLY WITHIN 3 DAYS OF HARVEST.)		
SOYBEANS	Mexican bean beetle	24-3 pts.
(DO NOT APPLY WITHIN 3 DAYS OF HARVEST.)		
SUGAR BEETS	Aphids	
	Spider mites	14-2 pts.
	Grasshoppers	14-2 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		
TOBACCO	Aphids	14-25 pts.
VETCH	Pex aphid	
	Vetch bruchid	14-2 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST OR PASTURING.)		
ALFALFA	Aphids	
	Potato leafhopper	
	Spider mites	
	Alfalfa weevil larvae	
	Spittlebug	14-2 pts.
	Grasshoppers	14-2 pts.
	Spotted alfalfa aphid	14-2 pts.
	Clover leaf weevil	14 pts.
	Flea aphid	1 pt.
	Lygus bug	14-2 pts.
	Asparagus	2 pts.
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		
ASPARAGUS	Asparagus beetle	2 pts.
	Thrips	14-2 pts.
(DO NOT APPLY WITHIN 1 DAY OF HARVEST.)		
BEANS	Mexican bean beetle	14 pts.
	Spider mites	14 pts.
	Japanese beetle*	14-2 pts.
	Aphids	
	Cucumber beetle	2 pts.
*Make 2 or more applications as needed.		
(DO NOT APPLY WITHIN 1 DAY OF HARVEST.)		
ORY BEANS	Lygus Bugs	14-2 pts.
California 4		
California 5		
(DO NOT APPLY WITHIN 1 DAY OF HARVEST.)		
VEGETABLES AND FRUIT		
broccoli	Harlequin	
Pumpkins (DO NOT APPLY WITHIN 3 DAYS OF HARVEST)	Cabbage bug (on collards)	14-2 pts.
Muskrus sprouts	Imported cabbage worm, cabbage looper, and diamondback moth	
Cabbage, collards		
Cauliflowr, kale		
Kohlrabi, mustard greens, Swiss chard, watercress		
*For control of cabbage loopers, worms, and diamondback moths, CYTHION should be used in combination with other recommended insecticides.		

CROP	PEST	APPLICATION RATES
NECTARINES	Plum curculio	2 pts.
	Mites	1-2 pts.
Application of this mixture should be made only in the petal fall period.		
(DO NOT APPLY WITHIN 7 DAYS OF HARVEST.)		
PEACHES	Oriental fruit moth	
	Plum curculio	2 pts.
	Green peach aphid	
	Black cherry aphid	
	Black peach aphid	
	Rusty plum aphid	
	Japanese beetle	1 pt.
	Terrapin scale	
	Cottony peach scale	2 pts.
(DO NOT APPLY WITHIN 7 DAY OF HARVEST.)		
PEARS	Mealybug	
	Mites	
	Pear psylla	1-2 pts.
	Codling moth	
	Plum curculio	2 pts.
	Fruit tree leaf roller	
	Red-banded leaf roller	2 pts.
(DO NOT APPLY WITHIN 1 DAY OF HARVEST.)		
PLUMS & PRUNES	Mealy plum aphid	1 pt.
	Plum curculio	CYTHION ¹
	Mealy plum aphid	should be used in combination with other recommended insecticides for control of these two pests.
	Bud moth	1 pt.
(DO NOT APPLY WITHIN 3 DAYS OF HARVEST.)		
PLUMS & PRUNES (Dormant and delayed dormant sprays)	Scale insects	1 pt. of 57% emulsifiable liquid plus 1 gal. superior oil per 100 gals water.
MAKE FULL COVERAGE DORMANT OR DELAYED DORMANT SPRAYS ONLY. (DO NOT APPLY WITHIN 3 DAYS OF HARVEST.)		
QUINCES	Plum curculio	
	Codling moth	
	Oriental fruit moth	2 pts.
	Forbes scale	1 pt.
	Mites	1-2 pts.
(DO NOT APPLY WITHIN 3 DAYS OF HARVEST.)		
BLACKBERRIES	Mites	
BOYSENBERRIES	Thrips	
DEWBERRIES	Leafhoppers	1 1/2 pts.
LOGANBERRIES	Japanese beetle	1 1/2 pt.
RASPBERRIES	Aphids	
	Rose scale	3 pts.
(DO NOT APPLY WITHIN 1 DAY OF HARVEST.)		
RASPBERRIES	Sap beetle	1 1/2 pts.
(DO NOT APPLY WITHIN 1 DAY OF HARVEST.)		
BLUEBERRIES	Blueberry Maggot ²	
¹ Blueberry maggots in the Northeast: 1 pt. of 57% emulsifiable liquid plus 1 1/2 qts. of Staley's Sauce Base #7 in 100 gals. of water per acre and apply by ground or air equipment. Preharvest interval - 8 hours.		
BLUEBERRIES	Japanese beetle	1 1/2 pts.
CRAWBERRIES	Leafhoppers	
	Black-headed fireworm	1 1/2 pts.
	Spittlebug nymphs	
	Cranberry fruitworms	1 1/2 pts.
DO NOT APPLY CLOSE TO OR DURING THE BLOOM OR BERRY-SET PERIOD. DO NOT APPLY WHEN FOLIAGE IS WET.		
STRAWBERRIES	Aphids	
	Spider mites	1 1/2 pts.
	Strawberry root weevil	1 1/2 pts.*
*Apply to soil surface before planting and work into top 6 to 8 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.)		
ALMONDS ³	Aphids	
	Red Spiders	1-2 pts.
	Peach twig borer	1-1 1/2 pts.
³ No more than 8 lbs. of actual CYTHION ¹ per acre should be applied to almond trees.		
PECANS	Spider mites	
	Aphids	1-2 pts.
	Pecan nut casebearer	1-2 pts.
	Pecan phylloxera	
	Pecan nut casebearer	1-2 pts.
	Pecan bud moth	1-2 pts.

CROP	PEST	APPLICATION RATES
ORNAMENTALS ⁴	Oyster shell scale	1 pt.
	Lace bug	1 pt.
	Eucynus scale	1-1 1/2 pts.
	Aphids	1 1/2 pts.
	Mealy bugs	1 1/2 pts.
	Spider mites	1 1/2 pts.
	Whitefly	1 1/2 pts.
	Fourlined leaf bug	
	Japanese beetle adult	
	Potato leafhopper	
	Tarnished plant bug	
	Thrips	
	Rose leafhopper	
	European pine shoot moth	
	Scurfy scale	1 1/2 pts.
*Apply sufficient amount for good coverage.		
	Birch leaf miner	
	Boxwood leaf miner	2 pts.
	Bagworms	2 pts.
	Tent caterpillars	2 pts.
	Azalea scale	
	Oak kermes ⁵	
	Pine leaf scale	
	Magnolia scale	2 pts.
*Apply when scale crawlers have settled on foliage.		
	Fletcher scale ⁶	2 pts.
	Florida red scale ⁷	2 pts.
*Apply when scale crawlers have settled on foliage.		
	Black scale crawlers	2 1/2 pts.
	Monterey pine scale	
	Soft scale	2 1/2 pts.
	Pine needle scale	4 pts.
	Wax scale	2 qts.*
*Apply in spring when crawlers are active. Repeat 1 or 2 full coverage applications at 10 day intervals.		
NOTE: Apply sufficient amount for good coverage.		
GREENHOUSE (in and around greenhouses and gardens)	Millipedes	
	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

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 Co-operative Agricultural Extension Service.

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 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 shall not include consequential commercial damages such as loss of profits or value, etc.

3/4
Best Available
Copy

4044

ACCEPTED
MAR 03 1973
UNDER THE FEDERAL INSECTICIDE
FUNGICIDE AND RODENTICIDE ACT
FOR ECONOMIC POISON REGISTER-
ED UNDER NO. SUBJECT
TO ATTACHED COMMENTS:

5905-196