

ACCEPTED
 SEP 8 1975
 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No.

2393-280

Hopkins

MALATHION

**57% Emulsifiable Liquid
 Insecticide - B**

CONTAINS
CYTHION
INSECTICIDE
THE PREMIUM GRADE MALATHION
TRADEMARK OF AMERICAN CYANAMID COMPANY
REG. TRADEMARK AMERICAN CYANAMID COMPANY

ACTIVE INGREDIENTS:

Malathion*	57%
Xylene	30%
INERT INGREDIENTS	13%
TOTAL	100%

*O, O-dimethyl phosphorodithioate of diethyl mercaptosuccinate.
 One gallon contains five pounds of Malathion.

EPA Reg. No. 2393-280 AA

EPA Est. No. 2393-WI-1

CAUTION

KEEP OUT OF REACH OF CHILDREN

Harmful if swallowed. Avoid breathing of spray mist. Avoid contact with skin; wash thoroughly after handling. Do not contaminate food or feed products. Keep container closed and away from heat, sparks and open flame.

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.

"This product is toxic to fish, shrimp, crab and other aquatic organisms. Keep out of lakes, streams, ponds, tidal marshes and estuaries. Shrimp and crab may be killed at application rates recommended on this label. Do not apply where these are important resources." "Do not apply where runoff is likely to occur. Do not apply when 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."

Do not reuse containers. Destroy when empty.

SEE ATTACHED FOLDER FOR COMPLETE INSTRUCTIONS AND NOTICE OF WARRANTY

NET CONTENTS

GALLONS

HOPKINS AGRICULTURAL CHEMICAL CO.

Madison, Wisconsin 53701

DIRECTIONS FOR USE

Unless otherwise indicated, dosages are given in pints of Hopkins Malathion 57% Emulsifiable Liquid Insecticide-B in sufficient water to cover one acre. Thorough, full coverage application should be made. Begin application when insects first appear and repeat as necessary. For orchard pests such as Codling Moth, Apple Maggot, Oriental Fruit Moth or Plum Curculio, apply at petal fall and every 10 to 14 days thereafter until control is achieved.

MALATHION 57% E. C.

Insect CROP Controlled	Dosage Amount	Days to Harvest	Insect CROP Controlled	Dosage Amount	Days to Harvest
Alfalfa Amount Per Acre			Avocados Amount Per 100 Gals.		
Weevil larvae	1-1/2-2 pts.	0	Greenhouse thrips	1-1/2 pts.	7
Aphids	1-1/2-2 pts.	0	Latania scale	1-1/2 pts.	7
Armyworms	2 pts.	0	Omnivorous looper	1-1/2 pts.	7
Clover leaf weevil	1-1/2 pts.	0	Orange tortrix	1-1/2 pts.	7
Grasshoppers	1-1/2-2 pts.	0	Soft brown scale	1-1/2 pts.	7
Leafhoppers	1-1/2-2 pts.	0	Barley Amount Per Acre		
Lygus bugs	1-1/2-2 pts.	0	Aphids	1-1/2 pts.	7
Pea aphid	1 pt.	0	Armyworms	2 pts.	7
Spider mites	1-1/2-2 pts.	0	Cereal leaf beetle	1-1/2 pts.	7
Centipede	1-1/2-2 pts.	0	Grasshoppers	1-1/2 pts.	7
Spotted alfalfa aphid	1-1/2-2 pts.	0	Greenbugs	1-1/2 pts.	7
Almonds Amount Per 100 Gals.			Beans		
Aphids	1-2 pts.	0	Aphids	2 pts.	1
Peach twig borer	1-1-1/2 pts.	0	Cucumber beetle	2 pts.	1
Red spiders	1-2 pts.	0	Japanese beetle	1-1/2-2 pts.	1
Apples			Lygus bugs	1-1/2-2 pts.	1
Aphids (Woody Apple, Green Apple)	1-1-1/2 pts.	3	ground sprays		
Red Apple	1-1-1/2 pts.	3	1-1/2 pts. in 10 gal. + equip.		
Bark beetle	1 pt.	3	Beans		
Blackberry beetle	2 pts.	3	Aphids	1-1/2-2 pts.	7*
Blackberry scale	1 pt.	3	*If beans are to be used as feed		
Mexican bean beetle	1-2 pts.	3	Blackberries		
Plum curculio	2 pts.	3	Aphids	3 pts.	1
Red-banded leaf miner	2 pts.	3	Japanese beetle	1-1/2 pts.	1
Thorn caterpillar	1-1-1/2 pts.	3	Leafhoppers	1-1/2 pts.	1
Apples (Dormant and delayed dormant sprays)*			Mites	1-1/2 pts.	1
Aphids (Woody Apple, Green Apple)	1 pt. + 1 gal. Superior Oil		Black scale	2 pts.	1
Bark beetle	1 pt. + 1 gal. Superior Oil		Thrips	1-1/2 pts.	1
Mites	1 pt. + 1 gal. Superior Oil		Blueberries		
Red-banded leaf miner	1 pt. + 1 gal. Superior Oil		Blackberry scale	1 pt. + 1 gal. Superior Oil	3 hrs.
Thorn caterpillar	1 pt. + 1 gal. Superior Oil		Japanese beetle	1-1/2 pts.	1
*Make full coverage application only, standard spray only.			Boysenberries		
Apricots			Aphids	2 pts.	1
Aphids	1-1/2-2 pts.	7	Japanese beetle	1-1/2 pts.	1
Codling moth	1-1/2-2 pts.	7	Leafhoppers	1-1/2 pts.	1

Insect CROP Controlled	Dosage Amount	Days to Harvest	Insect CROP Controlled	Dosage Amount	Days to Harvest	Insect CROP Controlled	Dosage Amount	Days to Harvest	CROP
Brussels Sprouts Amount Per Acre			Cantaloupes			Cotton* Amount Per Acre			Grapes (Continued)
Aphids	1-1/2-2 pts.	7	Aphids	1-1/2 pts.	1	Aphids	1-2 qts.	0	Lupines
Cabbage looper	2 pts.*	7	Cucumber beetle	2 pts.	1	Bolt weevil	1-2 qts.	0	Grass
Caterpillars	2 pts.*	7	Spider mites	1-1/2 pts.	1	Cotton leaf perforator	1-2 qts.	0	Macadamia
Diamond back moth	2 pts.*	7	*For best results, combine with other recommended insecticides.			Cotton leafworms	1-2 qts.	0	Green
Imported cabbage worm	2 pts.*	7	Celery (Anise* and fresh leaves and stalks only)			Fall armyworms	1-1/2-3 pts.	0	Melons
Cabbage			Aphids	1-1/2-2 pts.	7	Grasshoppers	1-1/2-3 pts.	0	Aphid
Aphids	1-2 pts.	7	Leafhoppers	2-1/2 pts.	7	Lygus bugs	1-2 qts.	0	Cucu
Cabbage looper	1-2 pts.*	7	Cherries Amount Per 100 Gals.			Mites	1-2 qts.	0	Spider
Imported cabbage worm	1-2 pts.*	7	Black cherry aphid	1-1/2 pts.	3	**Submerge entire root system for 5 minutes. Keep the solution agitated at all times.			
*For best results, combine with other recommended insecticides.			Cherry moth	1 pt.	3	Grass and Grass Hay			
Cabbages			Cherry leaf miner	1 pt.	3	Aphids	1-1/2-2 pts. OR		Adult
Aphids	1-2 pts.	7	Fruit tree leaf miner	1-1/2 pts.	3	1-1/2 pts. in 1 gal. diesel fuel oil	0	Aphid	Cater
Cabbage looper	1-2 pts.*	7	Japanese beetle	1 pt.	3	Armyworms	2 pts. OR 1-1/2		Leaf
Imported cabbage worm	1-2 pts.*	7	*Do not use on crops grown for seed and oil.			Grasshoppers	1-1/2-2 pts. OR		Spider
Cantaloupes			Citrus			1-1/2 pts. in 1 gal. diesel fuel oil	0	Mushroom	
Aphids	1-1/2 pts.	1	Black scale	1-1-1/2 pts.	7	Mites			
Cucumber beetle	2 pts.	1	California red scale	1-1-1/2 pts.	7	Mites			
Spider mites	1-1/2 pts.	1	Citricola scale	1-1-1/2 pts.	7	Mites			
Carrots			Florida red & purple scales	2 pts.	7	Mites			
Aphids	1-1/2-2 pts.	7	Purple scale	1-1-1/2 pts.	7	Mites			
Leafhoppers	2-1/2 pts.	7	Soft scale	1-1-1/2 pts.	7	Mites			
Cauliflower			Thrips	1-1/2 pts. per 200 gal.	7	Mites			
Caterpillars	2 pts.	7	Yellow scale	1-1-1/2 pt.	7	Mites			
Celery (Anise* and fresh leaves and stalks only)			Clover (Do not apply to clover in bloom)			Cowpea Hay			Phori
Aphids	1-1/2 pts.	7	Aphids	1-1/2-2 pts.	0	Grasshoppers	1-1/2-2 pts.	0	flies
Leafhoppers	2-1/2 pts.	7	Clover leaf weevil	1-1/2 pts.	0	Armyworms	2 pts. OR 1-1/2		
Spider mites	1-1/2 pts.	7	Grasshoppers	1-1/2-2 pts.	0	Grasshoppers	1-1/2-2 pts. OR		
Cherries Amount Per 100 Gals.			Leafhoppers	1-1/2-2 pts.	0	1-1/2 pts. in 1 gal. diesel fuel oil	0		
Black cherry aphid	1-1/2 pts.	3	Mites	1-1/2-2 pts.	0	Leafhoppers	1-1/2-2 pts. OR		
Cherry moth	1 pt.	3	Thrips	1-1/2 pts. per 200 gal.	7	1-1/2 pts. in 1 gal. diesel fuel oil	0		
Cherry leaf miner	1 pt.	3	Cucumbers*			Grass (Barngrass, Canary grass, Fescue, Orchard grass, Red Top, Timothy, Yellow foxtail) Amount Per Acre			
Fruit tree leaf miner	1-1/2 pts.	3	Aphids	1-1/2 pts.	1	Cereal leaf beetle	1-1-1/2 pts.	0	
Japanese beetle	1 pt.	3	Cucumber beetles	3 pts.	1	Honeydews			
Cauliflower			Pickleworm	1-1/2 pts.	1	Aphids	1-1/2 pts.	1	Muskmel
Caterpillars	2 pts.	7	Spider mites	1-1/2 pts.	1	Cucumber beetle	2 pts.	1	Aphid
Celery (Anise* and fresh leaves and stalks only)			Cucumbers*			Mites	1-1/2 pts.	1	Cucu
Aphids	1-1/2 pts.	7	Aphids	1-1/2 pts.	1	Hops			
Leafhoppers	2-1/2 pts.	7	Cucumber beetles	3 pts.	1	Aphids	1 pt.	10	Mustard
Spider mites	1-1/2 pts.	7	Pickleworm	1-1/2 pts.	1	Mites	1 pt.	10	Aphid
Cherries Amount Per 100 Gals.			Spider mites	1-1/2 pts.	1	Horseradish			Cabb
Black cherry aphid	1-1/2 pts.	3	Dandelions			Aphids	1-1/2-2 pts.	7	Free l
Cherry moth	1 pt.	3	Aphids	1-1/2-2 pts.	7	Kale			
Cherry leaf miner	1 pt.	3	Dewberries			Aphids	1-2 pts.	7	Impo
Fruit tree leaf miner	1-1/2 pts.	3	Aphids	3 pts.	1	Cabbage looper	1-2 pts.	7	work
Japanese beetle	1 pt.	3	Japanese beetle	1-1/2 pts.	1	Imported cabbage worm	1-2 pts.	7	Nectarin
Citrus			Leafhoppers	1-1/2 pts.	1	Hops			Mites
Black scale	1-1-1/2 pts.	7	Mites	1-1/2 pts.	1	Aphids	1 pt.	10	Plum
California red scale	1-1-1/2 pts.	7	Base scale	3 pts.	1	Horseradish			
Citricola scale	1-1-1/2 pts.	7	Thrips	1-1/2 pts.	1	Aphids	1-1/2-2 pts.	7	Free l
Florida red & purple scales	2 pts.	7	eggplant			Kale			
Purple scale	1-1-1/2 pts.	7	Aphids	1 pt.	3	Aphids	1-2 pts.	7	work
Soft scale	1-1-1/2 pts.	7	Lace bug	3 pts.	3	Cabbage looper	1-2 pts.	7	Nectarin
Thrips	1-1/2 pts. per 200 gal.	7	Spider mites	1 pt.	3	Imported cabbage worm	1-2 pts.	7	Mites
Yellow scale	1-1-1/2 pt.	7	Endive (Escarole)			Kohlrabi			
Clover (Do not apply to clover in bloom)			Figs Amount per 100 Gals.			Aphids	1-2 pts.	7	Oats
Aphids	1-1/2-2 pts.	0	Green fruit beetles	2 pts. + 1-2 gal. unsulfurized molasses	3	Kohlrahi			
Clover leaf weevil	1-1/2 pts.	0	Longhorn flies	2 qts. + 1-2 gal. unsulfurized molasses	3	Aphids	1-2 pts.	7	Aphid
Grasshoppers	1-1/2-2 pts.	0	Filberts Amount Per 100 Gals.			Leeks			
Leafhoppers	1-1/2-2 pts.	0	Aphids	1 pt.	0	Aphids	1-2 pts.	7	Engli
Mites	1-1/2-2 pts.	0	Longhorn beetle	1 pt.	0	Onion maggot flies	2-1/2 pts.	3	Grass
Collards			Filbert aphid	1 pt.	0	Thrips	3 pts.	3	Green
Aphids	1-1/2-2 pts.	7	Soil (overwinter stage)	1 pt.	0	Lentils			
Caterpillars	2 pts.	7	Furids	1 pt.	0	Aphids	1-2 pts.	7	Okra
Marbled cabbage bug	1 pt.	7	Garlic Amount Per Acre			Lettuce			
Corn (Field, Sweet and Pop)			Aphids			Aphids			
Aphids	1-1/2-2 pts.	7	Thrips			2 pts. Leaf 14 Head 7			
Codling moth	1-1/2-2 pts.	7	Aphids (Green-horned)			3 pts. Leaf 14 Head 7			
			Aphids			2 pts. Leaf 14 Head 7			
			Aphids			2 pts. Leaf 14 Head 7			

MALATHION 57% E. C.

CROP	Insect Controlled	Dosage Amount	Days to Harvest
Alfalfa			
	Amount Per Acre		
	Weevil larvae	1-1/2-2 pts.	0
	Aphids	1-1/2-2 pts.	0
	Armyworms	2 pts.	0
	Clover root weevil	1-1/2 pts.	0
	Grasshoppers	1-1/2-2 pts.	0
	Leafhoppers	1-1/2-2 pts.	0
	Lygus bugs	1-1/2-2 pts.	0
	Red aphid	1 pt.	0
	Spider mites	1-1/2-2 pts.	0
	Thrips	1-1/2-2 pts.	0
	Spotted alfalfa aphid	1-1/2-2 pts.	0
Almonds			
	Amount Per 100 Gals.		
	Aphids	1-2 pts.	7
	Peach twig borer	1-1-1/2 pts.	0
	Red spiders	1-2 pts.	0
Apples			
	Aphids (Woolly Apple, Green Apple)	1-1-1/2 pts.	3
	Brown aphid	1 pt.	3
	Codling moth	2 pts.	3
	European scale	1 pt.	3
	Mealybug	1-2 pts.	3
	Plum curculio	2 pts.	3
	Red-banded leaf roller	2 pts.	3
	Tent caterpillar	1-1-1/2 pts.	3
Apples (Dormant and delayed dormant sprays)*			
	Aphids (Woolly Apple, Green Apple)	1 pt. + 1 gal. Superior Oil	
	Brown aphid	OR	
		2 lbs. + 1 gal. Superior Oil	
	Mites	1 pt. + 1 gal. Superior Oil	
		OR	
		2 lbs. + 1 gal. Superior Oil	
	Red-banded leaf roller	1 pt. + 1 gal. Superior Oil	
		OR	
		2 lbs. + 1 gal. Superior Oil	
*Make full coverage dormant or delayed dormant sprays only.			
Apricots			
	Aphids	1-1/2-2 pts.	7
	Codling moth	1-1/2-2 pts.	7
	Orange tortrix	1-1/2-2 pts.	7
	Soft brown scale	1-1/2-2 pts.	7
	Terrapin scale	1-1/2-2 pts.	7
Asparagus			
	Amount Per Acre		
	Asparagus aphid	2 pts.	1
	Asparagus beetle	2 pts.	1
	Thrips	1-1/2-2 pts.	1

CROP	Insect Controlled	Dosage Amount	Days to Harvest
Avocados			
	Amount Per 100 Gals.		
	Greenhouse thrips	1-1/2 pts.	7
	Latania scale	1-1/2 pts.	7
	Omnivorous looper	1-1/2 pts.	7
	Orange tortrix	1-1/2 pts.	7
	Soft brown scale	1-1/2 pts.	7
Barley			
	Amount Per Acre		
	Aphids	1-1/2 pts.	7
	Armyworms	2 pts.	7
	Cereal leaf beetle	1-1-1/2 pts.	7
	Grasshoppers	1-1/2 pts.	7
	Greenbugs	1-1/2 pts.	7
Bears			
	Aphids	2 pts.	1
	Cucumber beetle	2 pts.	1
	Japanese beetle	1-1/2-2 pts.	1
	Lygus bugs	1-1/2-2 pts.	1
		ground equin	1
		1-1/2 pts. in 10 gal. + equip	
	Mexican bean beetle	1-1/2 pts.	1
	Mites	1-1/2 pts.	1
Beets			
	Aphids	1-1/2-2 pts.	7*
*If tops are to be used as feed			
Blackberries			
	Aphids	3 pts.	1
	Japanese beetle	1-1/2 pts.	1
	Leafhoppers	1-1/2 pts.	1
	Mites	1-1/2 pts.	1
	Rose scale	3 pts.	1
	Thrips	1-1/2 pts.	1
Blueberries			
	Borberry maggot	1 pt. + Staley's Bart*	8 hrs.
	Japanese beetle	1-1/2 pts.	1
*Northwest			
Boysenberries			
	Aphids	3 pts.	1
	Japanese beetle	1-1/2 pts.	1
	Leafhoppers	1-1/2 pts.	1
	Mites	1-1/2 pts.	1
	Rose scale	3 pts.	1
	Thrips	1-1/2 pts.	1
Broccoli			
	Aphids	1-2 pts.	3
	Cabbage looper	1-2 pts.*	3
	Caterpillars	2 pts.*	3
	Imported cabbage worm	1-2 pts.*	3
*For best results combine with other recommended insecticides			

CROP	Insect Controlled	Dosage Amount	Days to Harvest
Cabbage			
	Aphids	1-2 pts.	7
	Cabbage looper	1-2 pts.*	7
	Imported cabbage worm	1-2 pts.*	7
*For best results, combine with other recommended insecticides.			
Cantaloupes			
	Aphids	1-1/2 pts.	1
	Cucumber beetle	2 pts.	1
	Spider mites	1-1/2 pts.	1
Carrots			
	Aphids	1-1/2-2 pts.	7
	Leafhoppers	2-1/2 pts.	7
Cauliflower			
	Caterpillars	2 pts.	7
Celery (Anise* and fresh leaves and stalks only)			
	Aphids	1-1/2 pts.	7
	Spider mites	1-1/2 pts.	7
*Do not use on crops grown for seed and oil.			
Cherries			
	Amount Per 100 Gals.		
	Black cherry aphid	1-1/2 pts.	3
	Bull moth	1 pt.	3
	Cherry fruit fly	1 pt.	3
	Fruit tree leaf roller	1-1/2 pts.	3
	Japanese beetle	1 pt.	3
Citrus			
	Black scale	1-1-1/2 pts.	7
	California red scale	1-1-1/2 pts.	7
	Citricola scale	1-1-1/2 pts.	7
	Florida red & purple scales	2 pts.	7
	Japanese scale	1-1-1/2 pts.	7
	Soft scale	1-1-1/2 pts.	7
	Thrips	1-1/2 pts. per 200 gal.	7
	Yellow scale	1-1-1/2 pts.	7
Clover (Do not apply to clover in bloom.)			
	Aphids	1-1/2-2 pts.	0
	Clover leaf weevil	1-1/2 pts.	0
	Grasshoppers	1-1/2-2 pts.	0
	Leafhoppers	1-1/2-2 pts.	0
	Mites	1-1/2-2 pts.	0
Collards			
	Aphids	1-1/2-2 pts.	7
	Caterpillars	2 pts.	7
	Harlequin cabbage bug	1 pt.	7
Corn (Field, Sweet and Pop)			
	Aphids	1-1/2 pts.	5
	Armyworms	1-1/2-2 pts.	5
	Cereal leaf beetle	1-1-1/2 pts.	5
	Corn rootworm adults	1-1/2 pts.	5
	Grasshoppers	1-1/2 pts.	5
	Sep Beetle	1-1/2 pts.	5
	Thrips	1-1/2 pts.	5

CROP	Insect Controlled	Dosage Amount	Days to Harvest
Garden web worms			
	Grasshoppers	1-1/2-3 pts.	0
	Leafhoppers	1-2 qts.	0
	Lygus bugs	1-2 qts.	0
	Mites	1-2 qts.	0
	Thrips	1-2 qts.	0
	White flies	1-2 qts.	0
*Residue tolerances are for cotton seed			
Cowpea Hay			
	Grasshoppers	1-1/2-2 pts.	0
Cucumbers*			
	Aphids	1-1/2 pts.	1
	Cucumber beetle	3 pts.	1
	Pickleworm	1-1/2 pts.	1
	Spider mites	1-1/2 pts.	1
*Do not apply unless plants are dry.			
Dandelions			
	Aphids	1-1/2-2 pts.	7
Dewberries			
	Aphids	3 pts.	1
	Japanese beetle	1-1/2 pts.	1
	Leafhoppers	1-1/2 pts.	1
	Mites	1-1/2 pts.	1
	Rose scale	3 pts.	1
	Thrips	1-1/2 pts.	1
Eggplant			
	Aphids	1 pt.	3
	Lace bug	3 pts.	3
	Spider mites	1 pt.	3
Endive (Escarole)			
	Aphids	1-1/2-2 pts.	7
	Mites	1-1/2-2 pts.	7
Figs			
	Amount per 100 Gals.		
	Dried fruit beetles	2 qts. + 1-2 gal. unsulfurized molasses	3
	Vinegar flies	2 qts. + 1-2 gal. unsulfurized molasses	3
Filberts			
	Amount Per 100 Gals.		
	Apple mealybug	1 pt.	0
	Eye-spotted bud moth	1 pt.	0
	Filbert aphid	1 pt.	0
	Scale (crawler stage)	1 pt.	0
	Tinidids	1 pt.	0
Garlic			
	Amount Per Acre		
	Aphids	1-1/2-2 pts.	3
	Thrips	1-1/2-2 pts.	3
Grain Sorghum			
	Aphids (Greenbugs)	1-1/2 pts.	7
Grapes			
	European fruit lecanium	1-1/2 pts.*	3
	Leafhoppers	1-1/2 pts.*	3
	Mealybugs	1-1/2 pts.	3
	Overwintering grape phylloxera**	2-3 pts.**	-

CROP	Insect Controlled	Dosage Amount	Days to Harvest
**Submerge entire root system for 5 minutes. Keep the solution agitated at all times.			
Grass and Grass Hay			
	Aphids	1-1/2-2 pts. OR 1-1/2 pts. in 1 gal. diesel fuel oil	0
	Armyworms	2 pts. OR 1-1/2 pts. in 1 gal. diesel fuel oil	0
	Grasshoppers	1-1/2-2 pts. OR 1-1/2 pts. in 1 gal. diesel fuel oil	0
	Leafhoppers	1-1/2-2 pts. OR 1-1/2 pts. in 1 gal. diesel fuel oil	0
Grass (Barngrass, Canary grass, Fescue, Orchard grass, Red Top, Timothy, Yellow foxtail)			
	Amount Per Acre		
	Cereal leaf beetle	1-1-1/2 pts.	0
Honeydews			
	Aphids	1-1/2 pts.	1
	Cucumber beetle	2 pts.	1
	Mites	1-1/2 pts.	1
Hops			
	Aphids	1 pt.	10
	Mites	1 pt.	10
Horseradish			
	Aphids	1-1/2-2 pts.	7
Kale			
	Aphids	1-2 pts.	7
	Cabbage looper	1-2 pts.	7
	Imported cabbage worm	1-2 pts.	7
Kohlrabi			
	Aphids	1-2 pts.	7
Leuks			
	Aphids	1-2 pts.	7
	Onion maggot flies	2-1/2 pts.	3
	Thrips	3 pts.	3
Lentils			
	Aphids	1-1/2 pts.	3
	cowpea, aphids, and pea aphids	1-1/2 pts.	3
Lespedeza			
	Grasshoppers	1-1/2-2 pts.	0
Lettuce			
	Aphids	2 pts. Leaf 14 Head 7	
	Cabbage looper	3 pts. Leaf 14 Head 7	
	Leafhoppers	2 pts. Leaf 14 Head 7	
Loganberries			
	Aphids	3 pts.	1
	Japanese beetle	1-1/2 pts.	1
	Leafhoppers	1-1/2 pts.	1
	Mites	1-1/2 pts.	1
	Rose scale	3 pts.	1
	Thrips	1-1/2 pts.	1

CROP	Insect Controlled	Dosage Amount	Days to Harvest
Cucumbers			
	Spider mites		
Mint			
	Adult flea		
	Aphids		
	Caterpillars		
	Leafhopper		
	Spider mites		
Mushrooms			
	Mites		
Phorid & flies			
Muskmelons			
	Aphids		
	Cucumber		
	Spider mites		
Mustard Greer			
	Aphids		
	Cabbage looper		
	Flea beetle		
	Imported worm		
Nectarines			
	Mites		
	Plum curculio		
Oats			
	Armyworm		
	Cereal leaf		
	English grass		
	Grasshopper		
	Greenbugs		
Okra			
	Aphids		
	Japanese b		
Onions			
	Onion mag		
	Thrips		
Papayas			
	Aphids		
	Mealybug		
Parsley			
	Aphids		
Parsnips			
	Aphids		
Pasture and R			
	Aphids		
	Armyworm		

pts. 1	Leafhoppers	1-1/2-2 pts. OR	0
pts. 1		1 1/2 pts. in 1 gal	
pts. 1		diesel fuel oil	
dry.	Grass (Barngrass, Canary grass, Fescue, Orchard grass, Red Top, Timothy, Yellow foxtail)	Amount Per Acre	
pts. 7	Cereal leaf beetle	1-1-1/2 pts.	0
pts. 1	Honeydews		
pts. 1	Aphids	1-1/2 pts.	1
pts. 1	Cucumber beetle	2 pts.	1
pts. 1	Mites	1-1/2 pts.	1
pts. 1	Hops		
pts. 1	Aphids	1-1/2 pts.	1
pts. 1	Mites	1-1/2 pts.	1
pts. 2	Horseradish		
pts. 3	Aphids	1-1/2-2 pts.	7
pts. 3			
pts. 7	Kale		
pts. 7	Aphids	1-2 pts.	7
pts. 7	Cabbage looper	1-1 pts.	7
00 Gals.	Imported cabbage worm	1-2 pts.	7
1-2 gal	Kolrababi		
2 gal	Aphids	1-2 pts.	7
1-2 gal	Leeks		
ized	Aphids	1-2 pts.	7
s	Onion maggot flies	2-1/2 pts.	3
	Thrips	3 pts.	3
00 Gals	Lentils		
pt	Aphids		
pt	cowpea, p. and		
pt	pea aphids	1-1/2 pts.	3
pt	Lespedeza		
pt	Grasshoppers	1-1/2-2 pts.	0
pt	Lettuce		
r Acre	Aphids	2 pts. Leaf 14	
pts		Head 7	
pts	Cabbage looper	3 pts. Leaf 14	
pts		Head 7	
pts	Leafhoppers	2 pts. Leaf 14	
pts		Head 7	
pts	Loganberries		
pts	Aphids	2 pts.	1
pts	Japanese beetle	1-1/2 pts.	1
pts	Leafhoppers	1-1/2 pts.	1
pts	Mites	1-1/2 pts.	1
pts	Role scale	3 pts.	1
pts	Thrips	1-1/2 pts.	1

On	2 tbs per 3 gals. of water per 1000 sq. ft. of bed	1
Phorid & scarid flies	2-1/2 pts. per 130 gals. of water OR	
	2 tbs per 3 gals. of water per 1000 sq. ft. of bed	1
Muskmelons		
Aphids	1-1/2 pts.	1
Cucumber beetle	2 pts.	1
Spider mites	1-1/2 pts.	1
Mustard Greens		
Aphids	1-2 pts.	7
Cabbage looper	1-2 pts.	7
Flea beetles	1-1/2-2 pts.	7
Imported cabbage worm	1-2 pts.	7
Nectarines	Amount Per 100 Gals.	
Mites	1-2 pts.	7
Plum curculio	2 pts.	7
Oats	Amount per Acre	
Armyworms	2 pts.	7
Cereal leaf beetle	1-1-1/2 pts.	7
English grain aphid	1-1/2 pts.	7
Grasshoppers	1-1/2 pts.	7
Greenbugs	1-1/2 pts.	7
Okra		
Aphids	1-1/2 pts.	1
Japanese beetle	2 pts.	1
Onions		
Onion maggots	2-1/2 pts.	3
Thrips	1-1/2 pts.	3
Papayas		
Aphids	1-1/2-2 pts.	0
Mealybugs	1-1/2-2 pts.	0
Parsley		
Aphids	1-1/2-2 pts.	21
Parsnips		
Aphids	1-1/2-2 pts.	7
Pasture and Range Grass		
Aphids	1-1/2-2 pts. OR	
	1-1/2 pts. + 1 gal. diesel fuel oil	0
Armyworms	2 pts.	0

Plum curculio	2 pts.	7
Terrapin scale	2 pts.	7
Peanuts	Amount Per Acre	
Leafhoppers	1-1/2 pts.	0
Thrips	1-1/2 pts.	0
Pears	Amount Per 100 Gals.	
Codling moth	2 pts.	1
Fruit tree leaf miner	2 pts.	1
Mealybugs	1-2 pts.	1
Mites	1-2 pts.	1
Pear psyllid	1-2 pts.	1
Plum curculio	2 pts.	1
Red-banded sawfly	2 pts.	1
Peas	Amount Per Acre	
Aphids	1-1/2 pts.	*
Pea weevil	1-1/2-2 pts.	*
*7 day interval of vines are used as animal feed. 3-day interval of vines are NOT used as animal feed.		
Pecans	Amount Per 100 Gals.	
Aphids	1-2 pts.	0
Mites	1-2 pts.	0
Peppers	Amount Per Acre	
Aphids	1 pt.	3
Maggots	2-1/2 pts.	3
Pineapple		
Mealybug	1 gal.	7
Plums	Amount Per 100 Gals.	
Mealy plum aphid	1 pt.	3
Plums (Dormant and delayed dormant)*		
Scale insects	1 pt. + 1 gal. oil OR	
	3 lbs. + 2 gal. oil	
*Make full coverage dormant or delayed dormant sprays only.		
Potatoes	Amount Per Acres	
Aphids	1 pt.	0
Falsethornia bug	1-1/2 pts.	0
Leafhopper	1 pt.	0
Mealybug	1 pt.	0
Prunes	Amount per 100 Gals.	
Bud moth	1 pt.	3
Mealy plum aphid	1 pt.	3
Prunes (Dormant and delayed dormant)*		
Scale insects	1 pt. + 1 gal. oil OR	
	3 lbs. + 2 gal. oil	
*Make full coverage dormant or delayed dormant sprays only.		

Dried fruit beetle	3/4 Oz. Per 144 sq. ft. of paper	
Raisin moth	3/4 Oz. per 144 sq. ft. of paper	
Vinegar flies	1/4 Oz. per 144 sq. ft. of paper	
Raspberries	Amount Per 100 Gals.	
Aphids	3 pts.	
Japanese beetle	1-1/2 pts.	
Leafhoppers	1-1/2 pts.	
Mites	1-1/2 pts.	
Role scale	3 pts.	
Sap beetle	1-1/2-2 pts.	1
Thrips	1-1/2 pts.	1
Rice (grain form)	Amount Per Acre	
Rice leaf miner	2-1/2 pts.	7
Rice stalk bug	1-1-1/2 pts.	7
Tadpole shrimp (Cal)	3 pts.	
*Resist water spill from the treated fields for 48 hours following application.		
Rutabagas		
Aphids	1-1/2 pts.	7
Rye		
Armyworms	2 pts.	7
English grain aphid	1-1/2 pts.	7
Grasshoppers	1-1/2 pts.	7
Greenbugs	1-1/2 pts.	7
Safflower		
Aphids	1-1/2-2 pts.	3
Grasshoppers	1-1/2-2 pts.	3
Lygus bugs	1-1/2-2 pts.	3
Salsify		
Aphids	1-1/2-2 pts.	7
Shallots		
Aphids	1-1/2-2 pts.	3
Thrips	1-1/2-2 pts.	3
Soybeans	Amount Per Acre	
Grasshoppers	3 pts.	7
Green cloverworm	1 pt. & oz. to 3 pts.	3
Mexican bean beetle	3 pts.	3
Spinach		
Aphids	2 pts.	7
Squash		
Aphid	1-1/2 pts.	1
Cucumber beetles	2 pts.	1
Pickworm	2 pts.	1

White flies	1 1/2 - 2 1/2 pts.	3
Sugar Beets		
Aphids	1-1/2	2 pts. 3
Grasshoppers		3 pts. 3
Mites	1-1/2-2	pts. 3
Sweet Potatoes		
Leafhoppers	1-1/2	2 pts. 3
Morning-glory leafminers	2-1/2-3	pts. 3
Swiss Chard		
Aphids	1-1/2-2	pts. 7
Tobacco		
Aphids	1 1/2 - 2 1/2	pts. 7
Use maximum dosage in plant bed.		
Tomatoes		
Aphids	1 pt.	1
Armyworms (Cal)	2 3/4 pts.	3
Drosophila	2-1/2 pts.	1
Fruit worms (Cal)	2-3/4 pts.	3
Spider mites	1-1/2 pts.	1
Turnips		
Aphids	1-2 pts.	3
Cabbage looper	1-2 pts.	3
Imported cabbage worm	1-2 pts.	3
Vetch		
Omnivorous leaf tier	1-1/2-2 pts.	0
Pea aphid	1-1/2-2 pts.	0
Vetch bruchid	1-1/2-2 pts.	0
Watercress		
Aphids	1-1/2-2 pts.	7
Watermelons		
Aphids	1-1/2 pts.	1
Cucumber beetle	2 pts.	1
Spider mites	1-1/2 pts.	1
Wheat		
Armyworms	2 pts.	7
Grain leaf beetle	1-1/2 pts.	7
English grain aphid	1-1/2 pts.	7
Grasshoppers	1-1/2 pts.	7
Greenbugs	1-1/2 pts.	7

COMMERCIAL GREENHOUSE USES

CROP	Insect Controlled	Dosage	Directions For Use	Days to Harvest
VEGETABLES				
Cucumbers	Aphids, Armyworms, Cabbage loopers, Caterpillars, Earwigs, Garden flea hoppers, Molybous, Spider mites, Thrips, Whiteflies	1-1 1/2-2 pts. per 100 gals.	Spray plants thoroughly. Repeat applications as necessary.	
Endive	Aphids, Armyworms, Cabbage loopers, Serpentine leafminers, Thrips, Whiteflies	1-1 1/2-2 pts. per 100 gals.	Spray plants thoroughly. Repeat applications as necessary.	
Lettuce	Aphids, Armyworms, Cabbage loopers, Caterpillars, Serpentine leafminers, Thrips, Whiteflies	1-1 1/2-2 pts. per 100 gals.	Spray plants thoroughly. Repeat applications as necessary.	7 (head) 14 (leaf)
Radishes	Aphids, Flea beetles	1-1 1/2-2 pts. per 100 gals.	Spray plants thoroughly. Repeat applications as necessary.	7
Tomatoes	Aphids, Armyworms, Cabbage loopers, Caterpillars, Cut worm, Flea beetle, Garden fleahoppers, Mealybugs, Root-knot, Serpentine leafminer, Spider mites, Thrips, Whiteflies	1-1 1/2-2 pts. per 100 gals.	Spray plants thoroughly. Repeat applications as necessary.	1
Water Cress	Aphids, Flea beetles, Thrips	1-1 1/2-2 pts. per 100 gals.	Spray plants thoroughly. Repeat applications as necessary.	7

IN AND AROUND GREENHOUSES AND GARDENS

Insect Controlled	Dosage	Directions For Use
Aphids, Flea beetles, Spider mites	1 pint per 100 gals.	Apply to 150 square feet of surface or where insects congregate. Repeat at 7 to 10 day intervals as needed.

FLY AND MOSQUITO CONTROL

FLY CONTROL: For general control of house flies, domestic animals, around yards, kennels and most other facilities. Do not use in edible products areas of food processing.

Do not contaminate food, dishes or utensils. Avoid applying oil-based formula on ornamental plants as injury may occur. CYTHION may be toxic to certain species of fish, particularly in shallow water. CYTHION 57% E. L. WILL PERMANENTLY DAMAGE AUTOMOBILE PAINT. NOT BE SPRAYED. IF ACCIDENTAL EXPOSURE DOES OCCUR, THE CARPET SHOULD BE WASHED IMMEDIATELY.

FOREST CROPS

CROP	Insect Controlled	Rate	Directions For Use
Deciduous Forest and Shade Trees	Tent caterpillar	2 pts. / 100 gals. water	Make thorough application before larvae reach 1st stage.
Pines	Pine needleshath miner	1-1 1/2 pts. per acre	Apply by ground application when a large number of larvae are present.
Eastern Pines	Pine tent caterpillar	1-1 1/2 pts. per acre	Apply by ground application when a large number of larvae are present.
Red Pine	Red-headed pine sawfly	0.2 pts. per acre	Apply by mist spray when larvae are small.

HOUSEHOLD USES

DOMESTIC PETS
Insect Controlled

Dosage Directions For Use

		spray plants thoroughly. Repeat applications if necessary.	1
			7

INSECT CONTROL IN GREENHOUSES AND GARDENS

Insect Controlled	Dosage	Directions For Use
		Apply to 150 square feet of leaf surface or where insects congregate. Repeat at 7 to 10 day intervals as needed.

Pines	Tent caterpillar	2 pts./100 gals. water	Make thorough before larvae reach
	Pine needles-beetle miner	1-1 1/2 pts. per acre	Apply by ground method in 25 gals. water per acre
Eastern Pines			
Red Pine			
	Red-headed pine sawfly	0.2 pts. per acre	Apply by mist blower water per acre when complete.

FLY AND MOSQUITO CONTROL

FLY CONTROL: For use in and around buildings which house domestic animals, around yards, lawns and most agricultural plants. Do not use in edible products areas of food processing plants, restaurants, or other places where food is commercially prepared or processed. Do not use in public areas which are open to the public.

Insect Controlled	Dosage	Directions For Use
Adult flies	Spray Spray 5 Tablespoons + 1 pt. water OR 1 Cup + 1 1/2 gal. water OR 1 Quart + 12 gal. water	Apply as a spray at the rate of 1 gallon per 1,000 sq. ft. on painted surfaces and 2 gals. per 1,000 sq. ft. on unpainted surfaces where flies alight or congregate, such as walls, ceilings, stanchions, windows in dairy barns, fences, around garbage cans, etc.
Adult flies, Fly maggots	Bait Sprays 5 Tablespoons + 7 Tablespoons sugar or molasses (unsulfurized) or corn syrup + 1 gal. water OR 1 Cup + 1 Cup sugar or molasses (unsulfurized) or corn syrup + 2 1/2 gal. water OR	Apply as a bait spray over the surface of manure or poultry droppings. In loafing sheds spray the dry bedding within 18 inches of the walls and around upright braces. For effective control in and around dairy barns, fly-breeding sites such as manure and other waste material, should be eliminated. Do not apply to freshly whitewashed surfaces. Wait 14 days before applying.

HOUSEHOLD USES

DOMESTIC PETS Insect Controlled	Dosage	Directions For Use
Fleas, Lice, Ticks	1 oz. per gal.	Wet animal thoroughly every 2 weeks if necessary.
Fleas, Ticks	5 oz. per gal.	PREMISE TREATMENT 1,000 sq. ft. of surface yards and lawns. Remove debris before treatment. Repeat in 3 to 4 weeks if necessary.

IN AND AROUND HOMES, DAIRIES, FOOD PROCESSING PLANTS

Bedbugs	2 to 4 tablespoons per gal. deodorized kerosene	Apply lightly to all surfaces in sufficient quantity and generously to bed and furniture with special care to hiding places.
LAWNS Ant mounds	1-1 1/2 pts. per 100 gals.	Spray ant hills thoroughly. Flower beds, lawns, lightly in the infested areas. Repeat in 10 to 15 days if ant hills are still present.
Ground pearls	3 to 4 qts. per 100 gals.	Make full coverage of ground pearl nymph "crawler" or active nymphs. Wash into soil with water.

MOLASSIS CONTROL (Continued)		
Insect Controlled	Dosage	Directions For Use
	1 Quart + 2-1/2 lbs. sugar or 1 quart molasses (unsulfurized) or 1 quart corn syrup + 12 gal. water 1 part to 28 parts water, fuel oil or diesel oil 13 fl. oz. per acre	Spray building foundations, shrubs, low trees and lawn areas. For use in standing water (intermittently flooded areas, stagnant water, temporary rain pools). Mix in sufficient water or oil when applied by air or ground equipment.

Do not use on food, dishes or utensils. Avoid applying oil-based formulations to valuable surfaces as injury may occur.
 Toxic to certain species of fish, particularly in shallow water.
 WILL PERMANENTLY DAMAGE AUTOMOBILE PAINT. CARS SHOULD BE WASHED IMMEDIATELY. IF ACCIDENTAL EXPOSURE DOES OCCUR, THE CAR SHOULD BE WASHED IMMEDIATELY.

FOREST CROPS		
Insect Controlled	Rate	Directions For Use
Forest and Shade Trees Sawfly caterpillar	2 pts. per 100 gals. water	Make thorough coverage application before larvae reach third instar.
Needle-feeding Sawflies	1-1/2 pts. per acre	Apply by ground or aircraft equipment in 25 gals. of water. Make application when air is calm and temperature is below 65° F. Apply when larvae are small or have just overwintered.
Forest Sawflies	1-1/2 pts. per acre	Apply by aircraft in 2 gals. of water per acre when crawlers emerge. Repeat application in 1 week under conditions of heavy infestation. Make application when air is calm and temperature is below 65° F.
Forest Sawflies	0.2 pts. per acre	Apply by dust blower in 2 gallons of water per acre when egg hatch is complete.

HOUSEHOLD USES

LIVESTOCK		
CATTLE (Beef and non-milking) and Horses		
Insect Controlled	Dosage	Directions For Use
Horn fly	1 to 1-1/2 gal. per 100 gals. OR 6-1/2 to 10 oz. per 5 gals.	Apply complete coverage spray. Repeat at 2-week interval if needed.
Lice	1 gal. per 100 gals. OR 6-1/2 oz. per 5 gals.	Apply complete coverage spray. One treatment may be sufficient. Repeat only if needed.
Ticks	1 to 2 gals. per 100 gals. OR 6-1/2 to 13 oz. per 5 gals.	Apply complete coverage spray. Repeat at 2-week intervals if needed.
Back rubbing devices	2% Mixture in fuel oil	To reduce lice. May also reduce horn flies. Should be made continuously accessible, one to each 35 to 45 head of cattle and re-treat every 2 to 3 weeks.

SHEEP AND BOATS*		
Keds, Lice, Ticks	1 gal. per 100 gals. OR 6-1/2 oz. per 5 gals.	Spray animals thoroughly.

*DO NOT APPLY TO MILK COATS.
 Repeat application after 2 or 3 weeks if needed. Do not treat animals under one month of age.
 Residue tolerance: 4 ppm in meat, fat and meat by-products.

HOGS*		
Lice	1 gal. per 100 gals. OR 6-1/2 oz. per 5 gals.	Apply complete coverage spray to animals, pens and litter. One treatment may be sufficient. Repeat only if needed.
Sarcoptic mange	1 gal. per 100 gals. OR 6-1/2 oz. per 5 gals.	Apply complete coverage spray to all animals in herd, bedding and pens. Use extreme care to the mouth and all body surfaces of the animal, including inside of ears. One thorough spraying will usually control sarcoptic mange of swine, however, extensive cases will require a second treatment about 10 days after first application.

*AFTER SPRAYING, SWINE SHOULD BE KEPT OUT OF SUN AND WIND FOR A FEW HOURS.
 Residue tolerance: 4 ppm in meat, fat and meat by-products.

POULTRY (Chickens, Ducks, Geese & Turkeys)		
Chicken red mite	2 lbs. per gal. per 100 to 150 birds	DIRECT APPLICATION. Repeat application in 4 to 8 weeks or when necessary. Use as a supplement to premise treatment for chicken red mite.
	2 to 7 oz. per gal.	ROOST PAINT. Brush on at rate of 1 qt.

Tent caterpillar	2 pts./100 gals. water	Make thorough coverage application before larvae reach third instar.
Pine needlesheath miner	1-1/2 pts. per acre	Apply by ground or aircraft equipment in 25 gals. of water. Make application when air is calm and temperature is below 68° F. Apply when 75% of larvae have left overwintering mines.
Pine tortoise scale	1-1/2 pts. per acre	Apply by aircraft in 2 gals. of water per acre when crawlers emerge. Repeat application in 1 week under conditions of heavy infestation. Make application when air is calm and temperature is below 68° F.
Red-headed pine sawfly	0.8 pts. per acre	Apply by mist blower in 2 gallons of water per acre when egg hatch is complete.

HOUSEHOLD USES

PETS CONTROLLED		
	Dosage	Directions For Use
Lice, Ticks	1 oz. per gal.	Wet animal thoroughly. Repeat in 2 to 3 weeks if necessary.
Ticks	5 oz. per gal.	PREMISE TREATMENT: Apply per 1,000 sq. ft. of surface to pet quarters, yards and lawns. Remove manure or debris before treating. Repeat treatment in 3 to 4 weeks if necessary.

GROUND HOMES, DAIRIES, FOOD PROCESSING PLANTS

bugs	2 to 4 tablespoons per gal. deodorized kerosene.	Apply lightly to all mattress surfaces in sufficient quantity to "mist" the fabric and generously to beds and woodwork, with special care taken to wet all possible hiding places.
ants	1-1/2 pts. per 100 gals.	Spray ant hills thoroughly so that they are well soaked. For other small ants in flower beds, lawns, around trees, spray lightly in the infested areas. Repeat in 10 to 15 days if ants return.
ground pearls	3 to 4 qts. per 100 gals.	Make full coverage to soil surface when ground pearl nymphs are in the pink, "crawler" or active stage and immediately wash into soil with additional water.

ROOSTS		
Lice	1 gal. per 100 gals. OR 6-1/2 oz. per 5 gals.	Apply complete coverage spray to animals, pens and litter. One treatment may be sufficient. Repeat only if needed.
Sarcoptic mange	1 gal. per 100 gals. OR 6-1/2 oz. per 5 gals.	Apply complete coverage spray to all animals in herd, bedding and stalls. Use extreme care to thoroughly spray all body surfaces of the animal, including inside of ears. One thorough spraying will usually control sarcoptic mange of swine, however, extensive cases will require second treatment about 10 days after first application.

***AFTER SPRAYING, SWINE SHOULD BE KEPT OUT OF SUN AND WIND FOR A FEW HOURS.**
Residue tolerance: 4 ppm in meat, fat and meat by-products.

POULTRY (Chickens, Ducks, Geese & Turkeys)

Chicken red mite	2 tbs. per gal. per 100 to 150 birds	DIRECT APPLICATION: Repeat application in 4 to 8 weeks or when necessary. Use as a supplement to premise treatment for chicken red mite.
	2 to 7 oz. per gal.	ROOST PAINT: Brush on at rate of 1 pt. per 150 ft. of roost.
	4 tbs. per gal.	PREMISE TREATMENT: Apply liberally to litter, walls, ceilings, roost nests and adjacent areas. Force spray into cracks and crevices.
Chiggers	1 to 1-1/2 pt. per acre	RANGE TREATMENTS: Treat range thoroughly day before placing poultry on range. Repeat every 2 to 3 weeks.
Flies	4 tbs. per gal.	PREMISE TREATMENT: Apply liberally to litter, walls, ceilings, roost nests and adjacent areas. Force spray into cracks and crevices.
Lice, Northern fowl mite	2 tbs. per gal. per 100 to 150 birds 8-1/2 oz. per 15 gal. per 400 birds	DIRECT APPLICATION: That application in 4 to 8 weeks or when necessary.
	2 to 7 oz. per gal. of water or oil	TAIL-DIPPING: Hold bird by wings and dip 3 to 4 inches of tail into solution. Treat vent and surrounding areas. Repeat in 7 to 10 days if necessary.
	4 tbs. per gal.	ROOST PAINT: Brush on at rate of 1 pt. per 150 ft. of roost. PREMISE TREATMENT: Apply liberally to litter, walls, ceilings, roost nests and adjacent areas. Force spray into cracks and crevices.

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LIVESTOCK (Continued)		
Insect Controlled	Dosage	Directions For Use
Ticks	6 to 7 oz. per gal.	PREMISE TREATMENT: Apply liberally to walls, ceilings and adjacent areas. Force spray into cracks and crevices.
Residue tolerance: 4 ppm in or on meat, fat or meat by-products. 0.1 ppm in eggs (from application to poultry).		

NON-AGRICULTURAL LANDS

Insect Controlled	Dosage	Directions For Use
Grasshoppers	1-1/2 to 3 pts. OR 1-1/2 to 3 pts. in 1 gal. diesel fuel oil	

ORNAMENTALS: General Uses (Outdoor)

Injury may occur on ferns, hickory, viburnum, lantana, crassula and canaerti juniper following the use of Cythion Emulsifiable Liquid and Wettable Powders. Slight injury has also been reported on boston, pteris, and maidenhair ferns, petunias, small-leaf spirea, white pine and maples. Under extreme heat, drought and disease conditions the emulsifiable concentrates may cause slight damage to elms.

FLOWERS, SHADE TREES, SHRUBS

Insect Controlled	Dosage	Directions For Use
Aphids, Spider mites	1-1/2 pts. per 100 gals. OR 2 teaspoons per gal.	
Bagworms	2 pts. per 100 gals. OR 2 teaspoons per gal.	
Birch leaf miner, Boxwood leaf miner	2 pts. per 100 gals. OR 2 teaspoons per gal.	
European pine shoot moth, Four-lined leaf bug, Japanese beetle adult, Potato leafhopper, Rose leafhopper, Tarnish ed plant bug, Thrips	1-1/2 pts. per 100 gals. OR 2 teaspoons per gal.	
Lace bug	1 pt. per 100 gals. OR 2 teaspoons per gal.	
Mealybugs, Whiteflies	1-1/2 pts. per 100 gals. OR 2 teaspoons per gal.	

STORED PRODUCTS

BAGGED CITRUS PULP

Insect Controlled	Dosage	Directions For Use
Residual warehouse spray	1 pt. in sufficient water to make 2-1/2 gals. of spray OR 1 gal. per 19 gals. of water	Apply spray at the rate of 2 1,000 sq. ft. of surface or to Before bagged citrus pulp is thoroughly clean warehouses ing and burning all debris and Thoroughly spray with suffic pressure interior of empty wa (including cracks and protect outside walls to a height of 6 and ground to a distance of a from warehouse.
Do not use treated burlap bags other than for dried citrus pulp.		

**GRAINS (Barley, Corn, Grain Sorghum, Oats, Rice, Rye, Wheat) and
FIELD OR GARDEN SEEDS**

Cereal leaf beetle, Confused flour beetle, Flat grain beetle, Granary weevil, Indian meal moth, Lesser grain borer, Maize weevil, Red flour beetle, Rice weevil, Rusty grain beetle, Saw toothed grain beetle	1 gal. per 25 gals. of water.	RESIDUAL SPRAY BEFORE GRAINS. For a residual wall, machinery spray in grain elev treating truck beds, box cars holds, before loading grain ma thorough application. Before spray, clean elevators, box ca thoroughly. Remove and burn ings and debris.
	1 pt. in 2 to 5 gals. of water per 1,000 bushels	GRAINS GOING INTO STOR Apply as the grain is being loa turned into final storage.
	1/2 pt. in 1 to 2 gals. of water per 1,000 sq. ft. of grain sur- face area.	AS A SURFACE TREATME GRAINS ARE STORED. App evenly over the surface of the Apply immediately after grain into storage and repeat if nec

**NUTS
ALMONDS (In-Shell and Shelled)**

Indian meal moth, Merchant grain beetle	4 pt. or in sufficient water to treat 10,000 lbs. of almonds.	Use a suitable mechanical spr for that regulates the rate of the flow of the almonds. Avo with a fine mesh that stifles
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Aphids, Spider mites	1-1/2 pts. per 100 gals. OR 2 teaspoons per gal.	Apply when scale crawlers have settled on foliage.
Bagworms	2 pts. per 100 gals. OR 2 teaspoons per gal.	
Birch leaf miner, Boxwood leaf miner	2 pts. per 100 gals. OR 2 teaspoons per gal.	
European pine shoot moth, Four lined leaf bug, Japanese beetle adult, Potato leathopper, Rose leathopper, Tarnish ed plant bug, Thrips	1-1.2 pts. per 100 gals. OR 2 teaspoons per gal.	
Lace bug	1 pt. per 100 gals. OR 2 teaspoons per gal.	
Mealybugs, Whiteflies	1-1/2 pts. per 100 gals. or 2 teaspoons per gal.	
Oak kermes	2 pts. per 100 gals. OR 2 teaspoons per gal.	
Tent caterpillar	2 pts. per 100 gals. OR 2 teaspoons per gal.	

SCALES

Oyster shell	1 pt. per 100 gals. OR 2 teaspoons per gal.	Apply when scale crawlers have settled on foliage.
Euonymus scurfy	1-1/2 pts. per 100 gals. OR 2 teaspoons per gal.	
Azalea, Magnolia, Pine leaf	2 pts. per 100 gals. OR 2 teaspoons per gal.	
Fletcher	2 pts. per 100 gals. OR 2 teaspoons per gal.	Apply when scale crawlers have settled on foliage.
Florida red, Juniper	2 pts. per 100 gals. OR 2 teaspoons per gal.	Apply when scale crawlers have settled on foliage.
Black scale crawlers	2-1/4 pts. per 100 gals. 2 teaspoons per gal.	
Monterey pine, Soft	2-1/2 pts. per 100 gals. OR 2 teaspoons per gal.	
Pine needle scale	4 pts. per 100 gals. OR 4 teaspoons per gal.	
Wax	4 pts. per 100 gals. OR 4 teaspoons per gal.	Apply in spring when crawlers are active. Repeat 1 or 2 full-coverage applications at 10-day intervals.

toothed grain beetle	1 pt. in 2 to 5 gals. of water per 1,000 bushels	ings and debris. GRAINS GOING INTO STORAGE Apply as the grain is being load turned into final storage.
	1/2 pt. in 1 to 2 gals. of water per 1,000 sq. ft. of grain sur- face area.	AS A SURFACE TREATMENT GRAINS ARE STORED. Appl evenly over the surface of the g into storage and repeat if neces

NUTS
ALMONDS (In-Shell and Shelled)

Indian meal moth, Merchant grain beetle	4 1/2 oz. in sufficient water to treat 10,000 lbs. of almonds.	Use a suitable mechanical spray for that regulates the rate appl the flow of the almonds. Avoid with a fine mist that drifts awa the nozzle against wind and air
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PEANUTS

Confused flour beetle, Flat grain beetle, Granary weevil, Indian meal moth, Lesser grain borer, Red flour beetle, Rice weevil, Rusty grain beetle, Saw-toothed grain beetle	1 pt. in 2-1/2 gal. of water OR 1 in 19 gals. of water	RESIDUAL WAREHOUSE SP BEFORE STORING PEANUT as a coarse spray at the rate of per 1,000 sq. ft. of surface or Clean warehouse thoroughly of remains of old peanuts 1 to 2 v fore new peanut crop is stored thoroughly spray the interior of empty warehouse, especially on protected places. Treat outside height of 6 to 8 feet and the gr distance of 6 feet from the war
	2-1/2 pts. in 5 gals. of water for each 15 tons of farmers stock peanuts.	BULK SPRAY TREATMENT PEANUTS GOING INTO STO Use good spray equipment. Ap spray uniformly. Preferably, us able mechanical spray applicat regulates the rate of applicatio flow of peanuts. Adjust the op pressure of spray pump and siz nozzle opening to correlate the of spray delivery with the rate peanuts being treated. Avoid sp with a fine mist that drifts awa low nozzle pressure. Shield the against wind and air currents

SUPPLEMENTAL SURFACE SPRAY: After warehouse has been filled, level surface of peanuts before spraying. Apply surface spray using 1-1/4 lbs. of premium grade malathion 25% WP in 2 gallons of water and apply at the rate of 2 gallons per 1000 square feet 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 power 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.

STORED PRODUCTS	
Dosage	Directions For Use
1 pt. in sufficient water to make 2-1/2 gals. of spray OR 1 gal. per 19 gals. of water.	Apply spray at the rate of 2 gals per 1,000 sq. ft. of surface or to run-off. Before bagged citrus pulp is stored, thoroughly clean warehouses by removing and burning all debris and sweepings. Thoroughly spray with sufficient pressure interior of empty warehouse (including cracks and protected places), outside walls to a height of 6 to 8 feet and ground to a distance of about 6 ft. from warehouse.

other than for dried citrus pulp.
Sorghum, Oats, Rice, Rye, Wheat) and

1 gal. per 25 gals of water.	RESIDUAL SPRAY BEFORE STORING GRAINS. For a residual wall, floor and machinery spray in grain elevators, in treating truck beds, box cars and ships' holds, before loading grain make a thorough application. Before applying spray, clean elevators, box cars, etc. thoroughly. Remove and burn all sweepings and debris.
1 pt. in 2 to 5 gals. of water per 1,000 bushels	GRAINS GOING INTO STORAGE: Apply as the grain is being loaded or turned into final storage.
1/2 pt. in 1 to 2 gals. of water per 1,000 sq. ft. of grain surface area.	AS A SURFACE TREATMENT AFTER GRAINS ARE STORED. Apply the spray evenly over the surface of the grain. Apply immediately after grain is loaded into storage and repeat if necessary.

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4 fl. oz. in sufficient water to treat 10,000 lbs. of almonds	Use a suitable mechanical spray applicator that regulates the rate application to the flow of the almonds. Avoid spraying with a fine mist that drifts away. Shield the nozzle against wind and air currents.
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STORED PRODUCTS		
RAISINS (In Storage)		
Insect Controlled	Dosage	Directions For Use
Indian meal moth, Saw-toothed grain beetle	3/4 oz. per 144 sq. ft. of paper used as drying trays.	Dry grapes in the field on treated paper.

RESIDUAL SPRAY - BOX CARS FOR LOADING AND TRANSPORTING BAGGED FLOUR AND PACKAGED CEREALS		
Insect Controlled	Dosage	Directions For Use
Confused flour beetle, Flat grain beetle, Granary weevil, Indian meal moth, Lesser grain borer, Mite pests, Red flour beetle, Rice weevil, Rusty grain beetle, Saw-toothed grain beetle	1 gal. in 25 gals. water. OR 1 gal. in 19 gals. of deodorized kerosene *	Clean the box car thoroughly, then remove and burn all sweepings and debris. Spray walls and floor to the point of run-off. Let the sprayed box car stand empty with the doors open until the spray has thoroughly dried. Line the walls and floor of the box car with kraft paper before loading.
*The deodorized kerosene solution should be made up of 4 parts kerosene-type solvent plus one part aromatic hydrocarbon-type solvent.		

On and Around CULL FRUIT & VEGETABLE DUMPS		
Insect Controlled	Dosage	Directions For Use
Drosophila flies	1 1/2 gal. per 100 gals. water	Apply as a drench using 8 to 10 gals. of spray per 100 sq. ft. For best results, dumps should not be over 18 inches deep. DO NOT FEED TREATED FRUIT AND VEGETABLES.

In and Around WINERIES AND PROCESSING PLANTS		
Insect Controlled	Dosage	Directions For Use
Drosophila flies	3 1/2 oz. in 1 qt. water	Paint all doors and window sills. AVOID CONTAMINATION OF FOOD, UTENSILS, EQUIPMENT AND WATER.

PLANTS PROCESSING DRY MILK		
Insect Controlled	Dosage	Directions For Use
Black carpet beetles, Trogoderma species	1 pt. per 2 1/2 gals.	Clean premises thoroughly before applying and maintain good sanitation.

<p>weevil, Red beetle, Saw- beetle</p> <p>1 pt. in 2 to 5 gals. of water per 1,000 bushels</p> <p>1/2 pt. in 1 to 2 gals. of water per 1,000 sq. ft. of grain sur- face area.</p>	<p>thorough application. Before applying spray, clean elevators, box cars, etc. thoroughly. Remove and burn all sweep- ings and debris.</p> <p>GRAINS GOING INTO STORAGE: Apply as the grain is being loaded or turned into final storage.</p> <p>AS A SURFACE TREATMENT AFTER GRAINS ARE STORED. Apply the spray evenly over the surface of the grain. Apply immediately after grain is loaded into storage and repeat if necessary.</p>
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and Shelled,

<p>th, beetle</p> <p>4 fl. oz. in sufficient water to treat 10,000 lbs. of almonds.</p>	<p>Use suitable mechanical spray applica- tor that regulates the rate application to the flow of the almonds. Avoid spraying with a fine mist that drifts away. Shield the nozzle against wind and air currents.</p>
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<p>beetle, e, oth, rer, e, Rice rain thod</p> <p>1 pt. in 2-1/2 gals. of water OR 1 gal. in 19 gals. of water</p> <p>2-1/2 pts. in 5 gals. of water for each 15 tons of farmers stock peanuts.</p>	<p>RESIDUAL WAREHOUSE SPRAY -- BEFORE STORING PEANUTS. Apply as a coarse spray at the rate of 2 gals. per 1,000 sq. ft. of surface or to run-off. Clean warehouse thoroughly of trash and remains of old peanuts 1 to 2 weeks be- fore new peanut crop is stored. Then, thoroughly spray the interior of the empty warehouse, especially cracks and protected places. Treat outside walls to a height of 6 to 8 feet and the ground to a distance of 6 feet from the warehouse.</p> <p>BULK SPRAY TREATMENT -- PEANUTS GOING INTO STORAGE Use good spray equipment. Apply coarse spray uniformly. Preferably, use a suit- able mechanical spray applicator that regulates the rate of application to the flow of peanuts. Adjust the operating pressure of spray pump and size of nozzle opening to correlate the amount of spray delivery with the rate of flow of peanuts being treated. Avoid spraying with a fine mist that drifts away, by using low nozzle pressure. Shield the nozzle against wind and air currents</p>
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RESIDUAL WAREHOUSE SPRAY: After warehouse
cleaned of peanuts before spraying
1-1/2 lbs. of premium grade mala-
thion and apply at the rate of 2
gals. per 1,000 sq. ft. of surface. Apply first treat-
ment and leveled, but not later than
10 days before peanuts are stored.
Apply the second surface treat-
ment by treatments at 2 month
intervals. Use power sprayer equipped with
nozzle delivering a coarse spray. Re-
peat treatments 10 to 15
days later if warm temperatures
prevail. Repeat treatment until late winter.

Insect Controlled	Dosage	Directions For Use
Drosophila flies	1-1/2 gal. per 100 gals. water	Apply as a drench using 8 to 10 gals. of spray per 100 sq. ft. For best results, dumps should not be over 18 inches deep. DO NOT FEED TREATED FRUIT AND VEGETABLES.

In and Around WINERIES AND PROCESSING PLANTS

Insect Controlled	Dosage	Directions For Use
Drosophila flies	3-1/2 oz. in 1 qt. water	Paint all doors and window sills. AVOID CONTAMINATION OF WINE, FOOD, UTENSILS, EQUIPMENT AND WATER.

PLANTS PROCESSING DRY MILK

Insect Controlled	Dosage	Directions For Use
Black carpet beetles, Trogoderma species	1 pt. per 2-1/2 gals.	Clean premises thoroughly before apply- ing and maintain good sanitation at all times. Use spray equipment and nozzles that will produce a coarse spray. Applica- tion must be made only by an experienced or trained person. Apply as a residual spray to all sections of the plant and ware- houses where insects hide or crawl, such as cracks, corners, edges of floors, over- parts of walls, floors under storage plat- forms and underneath and behind protec- ed places. Avoid contamination of milk, dry milk equipment, utensils, work sur- faces, containers and liners. Repeat appli- cation as necessary

NOTICE OF WARRANTY

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

Manufactured By
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