

Hopkins MALATHION

57% Emulsifiable Liquid
Insecticide-B

CONTAINS
CYTHON
THE PREMIUM GRADE MALATHION

ACTIVE INGREDIENTS:	
Malathion*	57.00%
Xylene-range aromatic solvent	29.36%
INERT INGREDIENTS:	
	13.64%
TOTAL	100.00%

*O, O-Dimethyl dithiophosphate of diethyl mercaptosuccinate. One gallon contains five pounds of Malathion.
EPA Reg. No. 2393 280 AA

EPA Est. No. 2393 W1 1

CAUTION KEEP OUT OF REACH OF CHILDREN

Harmful if swallowed. Avoid breathing of spray mist. Avoid contact with skin; wear gloves and wash thoroughly after handling. Avoid wearing uniforms and garments again without laundering. Use approved respirator (tested and found acceptable by the U.S. Department of Agriculture). Wash contaminated skin immediately with soap and warm water. Shower at the end of the day.

NOTICE FOR PHYSICIAN: Malathion causes Cholinesterase inhibition. Intramuscular atropine USP is the antidote.

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.



CODE 1 2 3 4 5 6 7 8 9 (7 78)

ACCEPTED
2393-280
AUG 8: 1978
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 2393-280

DIRECTIONS FOR USE

Unless otherwise indicated, dosages are given in pints of Hop Emulsifiable Liquid Insecticide-B in sufficient water to cover full coverage application should be made. Begin application after appearance of pest and repeat as necessary. For orchard pests such as Maggot, Oriental Fruit Moth or Plum Curculio, apply at petal fall and repeat 7 to 10 days thereafter until control is achieved.

MALATHION 57% E.L.

CROP Controlled	Insect Amount	Dosage Amount	Days to Harvest	Insect*	CROP Controlled
Alfalfa					
	Woolly larvae	1 1/2 pts.	0		
	Aphids	1 1/2 pts.	0		
	Armyworms	2 pts.	0		
	Clover leaf weevil	1 1/2 pts.	0		
	Grasshoppers	1 1/2 pts.	0		
	Leafhoppers	1 1/2 pts.	0		
	Lygus bugs	1 1/2 pts.	0		
	Pea aphid	1 pt.	0		
	Spider mites	1 1/2 pts.	0		
	Spittlebug	1 1/2 pts.	0		
	Spotted alfalfa aphid	1 1/2 pts.	0		
Almonds					
	Aphids	1-2 pts.	0		
	Peach twig borer	1-1 1/2 pts.	0		
	Red spiders	1-2 pts.	0		
Apples					
	Aphids (Woolly Apple, Green Apple, Rosy Apple)	1-1 1/2 pts.	3		
	Bud moth	1 pt.	3		
	Codling moth	2 pts.	3		
	Forbes 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, Rosy Apple)	1 pt. + 1 gal. Superior Oil			
		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 pts.	7		
	Codling moth	1 1/2 pts.	7		
	Orange tortrix	1 1/2 pts.	7		
	Soft brown scale	1 1/2 pts.	7		
	Terrapin scale	1 1/2 pts.	7		
Asparagus					
	Asparagus beetle	2 pts.	1		
	Asparagus beetle	2 pts.	1		
	Thrips	1 1/2 pts.	1		

125

DIRECTIONS FOR USE

Indicated dosages are given in pints of Hopkins Malathion 57% insecticide B in sufficient water to cover one acre. Thorough coverage should be made. Begin application when insects first appear. For orchard pests such as Codling Moth, Apple Moth or Plum Curculio, apply at petal fall and every 10 to 14 days until control is achieved.

MALATHION 57% E.L.

Amount Per Acre	Days to Harvest	CROP Controlled	Insect	Dosage Amount	Days to Harvest
1 1/2 pts	0	Avocado	Greenhouse thrips	1 1/2 pts	7
1 1/2 pts	0		Latania scale	1 1/2 pts	7
1 1/2 pts	0		Omnivorous looper	1 1/2 pts	7
1 1/2 pts	0		Orange tortrix	1 1/2 pts	7
1 1/2 pts	0		Soft brown scale	1 1/2 pts	7
1 pt	0	Barley	Aphids	1 1/2 pts	7
1 1/2 pts	0		Armyworms	2 pts	7
1 1/2 pts	0		Cereal leaf beetle	1 1/2 pts	7
1 1/2 pts	0		Grasshoppers	1 1/2 pts	7
1 1/2 pts	0		Greenbugs	1 1/2 pts	7
1 1/2 pts	0	Beans	Aphids	2 pts	7
1 1/2 pts	0		Cucumber beetle	2 pts	7
1 1/2 pts	0		Japanese beetle	1 1/2 pts	7
1 1/2 pts	0		Lygus bugs	1 1/2 pts	7
1 1/2 pts	0		Mexican bean beetle	1 1/2 pts	7
1 1/2 pts	0		Mites	1 1/2 pts	7
1 1/2 pts	0	Beets	Aphids	1 1/2 pts	7
1 1/2 pts	0		Japanese beetle	1 1/2 pts	7
1 1/2 pts	0		Lygus bugs	1 1/2 pts	7
1 1/2 pts	0		Mites	1 1/2 pts	7
1 1/2 pts	0	Blackberries	Aphids	3 pts	7
1 1/2 pts	0		Japanese beetle	1 1/2 pts	7
1 1/2 pts	0		Leafhoppers	1 1/2 pts	7
1 1/2 pts	0		Mites	1 1/2 pts	7
1 1/2 pts	0		Rose scale	3 pts	7
1 1/2 pts	0		Thrips	1 1/2 pts	7
1 1/2 pts	0	Blueberries	Blueberry maggot	1 pt + 8 hrs	7
1 1/2 pts	0		Japanese beetle	1 1/2 pts	7
1 1/2 pts	0	Boysenberries	Aphids	3 pts	7
1 1/2 pts	0		Japanese beetle	1 1/2 pts	7
1 1/2 pts	0		Leafhoppers	1 1/2 pts	7
1 1/2 pts	0		Mites	1 1/2 pts	7
1 1/2 pts	0		Rose scale	3 pts	7
1 1/2 pts	0		Thrips	1 1/2 pts	7
1 1/2 pts	0	Broccoli	Aphids	1 1/2 pts	7
1 1/2 pts	0		Cabbage looper	1 1/2 pts	7
1 1/2 pts	0		Caterpillars	2 pts	7
1 1/2 pts	0		Imported cabbage worm	1 1/2 pts	7
1 1/2 pts	0		Thrips	1 1/2 pts	7

CROP Controlled	Insect	Dosage Amount	Days to Harvest
Brussels Sprouts	Aphids	1 1/2 pts	7
	Cabbage looper	2 pts	7
	Caterpillars	2 pts	7
	Diamondback moth	2 pts	7
	Imported cabbage worm	2 pts	7
Cabbage	Aphids	1 1/2 pts	7
	Cabbage looper	2 pts	7
	Imported cabbage worm	1 1/2 pts	7
Cantaloupes	Aphids	1 1/2 pts	7
	Cucumber beetle	2 pts	7
	Spider mites	1 1/2 pts	7
Carrots	Aphids	1 1/2 pts	7
	Leafhoppers	2 pts	7
Cauliflower	Caterpillar	2 pts	7
Celery (Anise* and fresh leaves and stalks only)	Aphids	1 1/2 pts	7
	Spider mites	1 1/2 pts	7
Cherries	Black cherry aphid	1 1/2 pts	7
	Bud moth	1 pt	7
	Cherry fruit fly	1 pt	7
	Fruit tree leaf roller	1 1/2 pts	7
	Japanese beetle	1 pt	7
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
	Purple 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 pts	0
	Clover leaf weevil	1 1/2 pts	0
	Grasshoppers	1 1/2 pts	0
	Leafhoppers	1 1/2 pts	0
	Mites	1 1/2 pts	0
Collards	Aphids	1 1/2 pts	7
	Caterpillars	2 pts	7
	Harlequin cabbage lig	1 pt	7
Corn (Field, Sweet and Pop)	Aphids	1 1/2 pts	5
	Armyworms	1 1/2 pts	5
	Cereal leaf beetle	1 1/2 pts	5
	Corn rootworm adults	1 1/2 pts	5
	Grasshoppers	1 1/2 pts	5
	Sap beetle	1 1/2 pts	5
	Thrips	1 1/2 pts	5

CROP Controlled	Insect	Dosage Amount	Days to Harvest
Cotton*	Aphids	1-2 qts	0
	Boll weevil	1-2 qts	0
	Cotton leaf perforator	1-2 qts	0
	Cotton leafworms	1-2 qts	0
	Fall armyworms	1 1/2 pts	0
	Fleahoppers	1 1/2 pts	0
	Garden web worms	1 1/2 pts	0
	Grasshoppers	1 1/2 pts	0
	Leafhoppers	1-2 qts	0
	Mites	1-2 qts	0
	Thrips	1-2 qts	0
	White flies	1-2 qts	0
Coupee Hay	Grasshoppers	1 1/2 pts	0
Cucumbers*	Aphids	1 1/2 pts	7
	Cucumber beetles	3 pts	7
	OR 1 1/2 pts per 1/2 acre		
	Pickleworm	1 1/2 pts	7
	Spider mites	1 1/2 pts	7
Dandelions	Aphids	1 1/2 pts	7
Dewberries	Aphids	3 pts	7
	OR 1 1/2 pts per 1/2 acre		
	Japanese beetle	1 1/2 pts	7
	Leafhoppers	1 1/2 pts	7
	Mites	1 1/2 pts	7
	Rose scale	3 pts	7
	OR 1 1/2 pts per 1/2 acre		
	Thrips	1 1/2 pts	7
Eggplant	Aphids	1 pt	7
	Lace bug	3 pts	7
	OR 1 1/2 pts per 1/2 acre		
	Spider mites	1 pt	7
Endive (Escarole)	Aphids	1 1/2 pts	7
	Mites	1 1/2 pts	7
Figs	Dried fruit beetles	2 qts + 1-2 gal unsulfurized molasses*	3
	Vinegar flies	2 qts + 1-2 gal unsulfurized molasses*	3
Filberts	Apple mealybug	1 pt	0
	Eye spotted bud moth	1 pt	0
	Filbert aphid	1 pt	0
	Scale (crawler stage)	1 pt	0
	Tingids	1 pt	0
Garlic	Aphids	1 1/2 pts	3
	Thrips	1 1/2 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

CROP Controlled	Insect	Dosage Amount	Days to Harvest
Grape (Continued)	Overwintering grape phylloxera**	2-3 pts**	
	OR 1-1 1/2 pts per 1/2 acre		
	Spider mites	1 1/2 pts	3
	Terzaghi scale	1 1/2 pts	3
Grass Hay	Aphids	1 1/2 pts	0
	OR 1 1/2 pts in 1 gal diesel fuel oil		
	Armyworms	2 pts	0
	OR 1 1/2 pts in 1 gal diesel fuel oil		
	Grasshoppers	1 1/2 pts	0
	OR 1 1/2 pts in 1 gal diesel fuel oil		
	Leafhoppers	1 1/2 pts	0
	OR 1 1/2 pts in 1 gal diesel fuel oil		
Grass (Barngrass, Canary grass, Fescue, Orchard grass, Red Top, Timothy, Yellow foxtail)	Cereal leaf beetle	1 1/2 pts	0
Honeydews	Aphids	1 1/2 pts	7
	Cucumber beetles	2 pts	7
	Mites	1 1/2 pts	7
Hops	Aphids	1 pt	10
	Mites	1 pt	10
Horseradish	Aphids	1 1/2 pts	7
Kale	Aphids	1 1/2 pts	7
	Cabbage looper	1 1/2 pts	7
	Imported cabbage worm	1 1/2 pts	7
Kohlrabi	Aphids	1 1/2 pts	7
Leeks	Aphids	1 1/2 pts	7
	Onion maggot flies	2 1/2 pts	3
	OR 1 1/4 pts per 1/2 acre		
	Thrips	3 pts	3
	OR 1 1/2 pts per 1/2 acre		
Lentils	Aphids	1 1/2 pts	7
	OR 1 1/2 pts per 1/2 acre		
Leaves	Aphids	1 1/2 pts	7
	Grasshoppers	1 1/2 pts	7
Lettuces	Aphids	2 pts	14
	Head	7	
	Cabbage looper	3 pts	14
	Head	7	
	OR 1 1/2 pts per 1/2 acre		
	Leafhoppers	2 pts	14
	Head	7	
Loganberries	Aphids	3 pts	1
	OR 1 1/2 pts per 1/2 acre		
	Japanese beetle	1 1/2 pts	1

CROP Controlled	Insect	Dosage Amount	Days to Harvest
Loganberries	Leafhoppers	1 1/2 pts	1
	Mites	1 1/2 pts	1
	Rose scale	3 pts	1
	OR 1 1/2 pts per 1/2 acre		
	Thrips	1 1/2 pts	1
Lupines	Grasshoppers	1 1/2 pts	0
Macadamia Nuts	Green stink bug	1 1/2 pts	0
Melons	Aphids	1 1/2 pts	7
	Cucumber beetle	2 pts	7
	Spider mites	1 1/2 pts	7
Mint	Adult flea beetles	1 1/2 pts	7
	Aphids	1 1/2 pts	7
	Caterpillars	1 1/2 pts	7
	Leafhoppers	1 1/2 pts	7
	Spider mites	1 1/2 pts	7
Mushrooms	Mites	2 1/2 pts per 130 gals of water	
	OR		
	2 lbs per 3 gals of water per 1000 sq. ft. of bed		
	Phorid & sciarid flies	2 1/2 pts per 130 gals of water	
	OR		
	2 lbs per 3 gals of water per 1000 sq. ft. of bed		
Muskmelons	Aphids	1 1/2 pts	7
	Cucumber beetles	2 pts	7
	Spider mites	1 1/2 pts	7
Mustard Greens	Aphids	1 1/2 pts	7
	Cabbage looper	1 1/2 pts	7
	Flea beetles	1 1/2 pts	7
	Imported cabbage worm	1 1/2 pts	7
Nectarines	Mites	1 1/2 pts	7
	Plum curculio	2 pts	7
Onions	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
Olestra	Aphids	1 1/2 pts	1
	Japanese beetle	2 pts	1
Onions	Onion maggots	2 1/2 pts	3
	OR 1 1/4 pts per 1/2 acre		
	Thrips	1 1/2 pts	3
Papayas	Aphids	1 1/2 pts	0
	Mealybugs	1 1/2 pts	0
Parsnips	Aphids	1 1/2 pts	21
Parsnips	Aphids	1 1/2 pts	7

CROP Controlled	Insect	Dosage Amount
Pasture and Range Grass	Aphids	1 1/2 pts in 1 gal diesel fuel
	Armyworms	2 pts
	Grasshoppers	1 1/2 pts in 1 gal diesel fuel
	Leafhoppers	1 1/2 pts in 1 gal diesel fuel
Peaches	Aphids	Amount Per 100
	Green Peach	
	Black Cherry	
	Rusty Plum	
	Cottony peach scale	
	Japanese beetle	
	Oriental fruit moth	
	Plum curculio	
	Terrapin scale	
Peanuts	Leafhoppers	Amount Per 100
	Thrips	
Pears	Codling moth	Amount Per 100
	Fruit tree leaf roller	
	Mealybugs	
	Mites	
	Pear psylla	
	Plum curculio	
	Red-banded leaf roller	
Pears	Aphids	Amount Per 100
	Pea weevil	
	*7 day interval if vines are used feed 3 day interval if vines are not annual feed	
Pecans	Aphids	Amount Per 100
	Mites	
Peppers	Aphids	Amount Per 100
	Maggots	
	OR 1 1/2 pts per 1/2 acre	
Pineapple	Mealybug	Amount Per 100
	OR 1 qt per 1/2 acre	
Plums	Amount Per 100	
	Mealy plum aphid	
Plums (Dormant and delayed dormant)*	Scale insects	1 pt + 1 gal 0-10-0
		3 lbs + 2-4 gal
	*Make full coverage dormant and dormant sprays only	
Potatoes	Aphids	Amount Per 100
	False chinch bug	
	Leafhoppers	
	Mealybugs	
Prunes	Bud moth	Amount Per 100
	Mealy plum aphid	

2893-280

126

125

COMMERCIAL GREENHOUSE USES				
CROP	Insect Controlled	Dosage	Directions For Use	Days to Harvest
VEGETABLES				
Cucumbers	Aphids, Armyworms, Cabbage loopers, Caterpillars, Earwigs, Garden flea hoppers, Mealybugs, Spider mites, Thrips, Whiteflies	1 1/2 - 2 pts per 100 gals	Spray plants thoroughly. Repeat applications as necessary. Do not apply to cucurbits unless plants are dry.	1
Endive	Aphids, Armyworms, Cabbage loopers, Serpentine leafminers, Thrips, Whiteflies	1 1/2 - 2 pts per 100 gals	Spray plants thoroughly. Repeat applications as necessary.	7
Lettuce	Aphids, Armyworms, Cabbage loopers, Caterpillars, Serpentine leafminers, Thrips, Whiteflies	1 1/2 - 2 pts per 100 gals	Spray plants thoroughly. Repeat applications as necessary.	7 (head) 14 (leaf)
Radishes	Aphids, Flea beetles	1 1/2 - 2 pts per 100 gals	Spray plants thoroughly. Repeat applications as necessary.	7
Tomatoes	Aphids, Armyworms, Cabbage loopers, Caterpillars, Cutworms, Drosophila, Garden fleahoppers, Mealybugs, Root mites, Serpentine leafminers, Spider mites, Thrips, Whiteflies	1 1/2 - 2 pts per 100 gals	Spray plants thoroughly. Repeat applications as necessary.	1
Water Cress	Aphids, Serpentine leafminers, Thrips	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
Millipedes, Springtails, Springtails	1 teaspoon per gal	Apply to 150 square feet of soil surface or where insects congregate. Repeat at 7 to 10 day intervals as needed.

FLY AND MOSQUITO CONTROL		
FLY CONTROL For use in and around buildings which house domestic animals, around yards, homes and meat and food processing plants. Do not use in edible products areas of food processing plants, restaurants or other areas where food is commercially prepared or provision. Do not use in serving areas where food is exposed.		
Insect Controlled	Dosage	Directions For Use
Adult flies	Straight Sprays 5 Tablespoons + 1 gal water OR 1 Cup + 2 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 gal. 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 (unsulfurated) or corn syrup + 1 gal water OR 1 Cup + 1 Cup sugar or molasses (unsulfurated) 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.

FLY AND MOSQUITO CONTROL (Continued)		
Insect Controlled	Dosage	Directions For Use
Mosquitoes	1 Quart + 2 1/2 lbs sugar or 1 quart molasses (unsulfurated) or 1 quart corn syrup + 12 gal water	Spray building foundations, shrubs, low trees and lawn areas.
Mosquito larvae	1 part to 28 parts water, fuel oil or diesel oil 13 fl oz per acre	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 contaminate food, dishes or utensils. Avoid applying oil based formulations to valuable 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. CARS SHOULD NOT BE SPRAYED. IF ACCIDENTAL EXPOSURE DOES OCCUR, THE CAR 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 coverage application before larvae reach third instar.
Pines	Pine needle sheath 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.
Eastern Pines	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 Pine	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		
Insect Controlled	Dosage	Directions For Use
Fleas, Lice, Ticks	1 oz per gal	Wet animal thoroughly. Repeat in 2 to 3 weeks if necessary.
Fleas, Ticks	1/2 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.
IN AND AROUND HOMES, DAIRIES, FOOD PROCESSING PLANTS		
Bedbugs	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.
LAWNS	Ant mounds	1-1/2 pts per 100 gals
Ant mounds	ground pearls	3 to 4 qts per 100 gals OR 1/4-1 qt per 25 gals

LIVESTOCK	
Insect Controlled	Dosage
CATTLE (Beef and non milking) and Horses	
Horn fly	1 to 1 1/2 gal per 100 gals OR 6 1/2 to 10 oz per 5 gals
Lice	1 gal per 100 gals OR 6 1/2 oz per 5 gals.
Ticks	1 to 2 gals per 100 gals OR 6-1/2 to 13 oz per 5 gals
Back rubbing devices	2% Mixture in fuel oil

SHEEP AND GOATS*

Keds, Lice, Ticks 1 gal. per 100 gals. OR 6-1/2 oz per 5 gals.

***DO NOT APPLY TO MILK GOATS.** Repeat application after 2 or 3 weeks if needed. Do not use. Residue tolerance 4 ppm in meat, fat and meat by products.

HOGS*	
Insect Controlled	Dosage
Lice	1 gal per 100 gals. OR 6-1/2 oz. per 5 gals.
Sarcoptic mange	1 gal. per 100 gals OR 6-1/2 oz per 5 gals

***AFTER SPRAYING, SWINE SHOULD BE KEPT OUT OF** Residue tolerance 4 ppm in meat, fat and meat by products.

POULTRY (Chickens, Ducks, Geese & Turkeys)	
Insect Controlled	Dosage
Chicken red mite	2 tbs. per gal per 100 to 150 birds
Lice	2 to 7 oz per gal.
Chiggers	4 tbs. per gal.
Flies	1 to 1-1/2 pt per acre
Flies	4 tbs. per gal
Lice, Northern louse mite	2 tbs. per gal per 100 to 150 birds OR 1-1/2 oz per 15 gal per 400 birds
Lice, Northern louse mite	2 to 7 oz. per gal of water or oil OR 4 tbs. per gal

2393-280

128

Dosage		Directions For Use		STORED PRODUCTS		STORED PRODUCTS	
6 to 7 oz per gal		PREMISE TREATMENT Apply liberally to walls, ceilings and adjacent areas. Force spray into cracks and crevices.		BAGGED CITRUS PULP Insect Controlled		RAISINS (In Storage) Insect Controlled	
1-1/2 to 3 pts OR 1 1/2 to 3 pts in 1 gal diesel fuel oil		meat, fat or meat by-products. 1 to poultry)		Residual warehouse spray		Indian meal moth, Saw toothed grain beetle	
				1 pt in sufficient water to make 2 1/2 gals of spray OR 1 gal per 19 gals of water		3/4 oz per 144 sq ft of paper used as drying trays	
				Apply spray at the rate of 2 gals per 1,000 sq ft of surface or to runoff. Before bagged citrus pulp is stored, thoroughly clean warehouses by removing and burning all debris and sweeping. 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.		RESIDUAL SPRAY - BOX CARS FOR LOADING AND TRANSPORTING BAGGED FLOUR AND PACKAGED CEREALS Insect Controlled	
				Do not use treated butup bags other than for dried citrus pulp.		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 qt in 6 1/4 gals water OR 1 gal in 19 gals of deodorized kerosene OR 1 qt in 4 1/4 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 runoff. 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	
						Drosophila flies	
						1 1/2 gal per 100 gals water OR 1/2 qt per 12 1/2 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	
						Drosophila flies	
						3 1/2 oz in 1 qt water	
						Paint all doors and window screens. AVOID CONTAMINATION OF WINE, FOOD, UTENSILS, EQUIPMENT AND WATER.	
						PLANTS PROCESSING DRY MILK Insect Controlled	
						Black carpet beetles, Trogoderma species	
						1 pt per 2 1/2 gals	
						Clean premises thoroughly before applying and maintain good sanitation at all times. Use spray equipment and nozzles that will produce a coarse spray. Application must be made only by an experienced or trained person. Apply as a residual spray to all sections of the plant and warehouses where insects hide or crawl, such as cracks, corners, edges of floors, over parts of walls, floors under storage platform and under north and behind protected places. Avoid contamination of milk, dry milk equipment, utensils, cork surfaces, containers and lines. Repeat application as necessary.	
						NOTICE OF WARRANTY	
						Seller makes no warranty, express 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.	

NON-AGRICULTURAL LANDS

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

PLANTS: General Uses (Outdoor)

...ory, viburnum, lantana, crumelia and c...er following the... and Vegetable Powders. Slight injury has also been reported on... rens, pecunias, small-leaf spirea, white pine and maples. Under ex... conditions the emulsifiable concentrates may cause slight damage

FRUITS

Dosage	Directions For Use
1 1/2 pts per 100 gals OR 2 teaspoons per gal	Apply when scale crawlers have settled on foliage.
2 pts per 100 gals OR 2 teaspoons per gal	
2 pts per 100 gals OR 2 teaspoons per gal	
1-1/2 pts per 100 gals OR 2 teaspoons per gal	
1 pt per 100 gals OR 2 teaspoons per gal	
1 1/2 pts per 100 gals OR 2 teaspoons per gal	Apply when scale crawlers have settled on foliage.
2 pts per 100 gals OR 2 teaspoons per gal	
2 pts per 100 gals OR 2 teaspoons per gal	Apply when scale crawlers have settled on foliage.
2 pts per 100 gals OR 2 teaspoons per gal	
2 1/2 pts per 100 gals OR 2 teaspoons per gal	Apply in spring when scale crawlers are active. Repeat 1 or 2 full coverage applications at 10 day intervals.
4 pts per 100 gals OR 4 teaspoons per gal	
4 pts per 100 gals OR 4 teaspoons per gal	

GRAINS (Barley, Corn, Grain Sorghum, Oats, Rice, Rye, Wheat) and FIELD OR GARDENSEEDS

Insect Controlled	Dosage	Directions For Use
Cereal leaf beetle, 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 per 25 gals of water OR 1 qt per 6 1/4 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 ship's holds, before loading grain make a thorough application. Before applying spray, clean out all box cars, etc thoroughly. Remove and burn all sweepings and debris. GRAINS GOING INTO STORAGE Apply as the grain is being loaded or turned into final storage. 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 keep at least 2 ft away.
	1 pt in 2 to 5 gals of water per 1,000 bushels	
	1.2 pt in 1 to 2 gals of water per 1,000 sq ft of grain surface area	

NUTS

Insect Controlled	Dosage	Directions For Use
Indian meal moth, Merchant grain beetle	4 fl. oz in sufficient water to treat 10,000 lbs of almonds	Use a suitable mechanical spray applicator that regulates the rate of application to the flow of the almonds. Avoid spraying with a fine mist that drifts away. Shield the nozzle against wind and air currents.

PEANUTS

Insect Controlled	Dosage	Directions For Use
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 gals of water OR 1 gal in 19 gals of water	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 runoff. Clean warehouse thoroughly of trash and remains of old peanuts 1 to 2 weeks before 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.
	Farmers Stock Peanuts 2 1/2 pts in 5 gals of water for each 15 tons OR 1 1/4 pts in 2 1/2 gals of water for each 7 1/2 tons	BULK SPRAY, THROUGHOUT STORAGE Use good spray equipment. Apply coarse spray uniformly. Preferably, use a suitable 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 calculate the amount of spray delivered with a 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.

SUPPLEMENTAL SURFACE SPRAY After warehouse has been treated, treat surface of peanuts before storing. Apply surface spray using 1 1/2 lbs of product per 25 gals of water at the rate of 2 gals per 1,000 sq ft of surface. Apply first coat as soon as peanuts are loaded and leveled, but not later than the first week in October. Apply the second surface spray 2 to 3 months later, for use by treatment of 2 to 3 months. Use a piston type power sprayer equipped with agitator and nozzle capable of delivering coarse spray. No coat surface, except within 60 days after it was in temperature. Other methods for further treatment until late in harvest.

129

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130