

PM 14 2070-200

1078



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 7 1994

J ALLEN DUNLAP III
HACO, INC.
BOX 7190
MADISON, WI 53707

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 9/16/93 Response to PR Notice 93-7
EPA Reg. No. 2393-280
HOPKINS MALATHION 57% EMULSIFIABLE LIQUID INSECTICIDE

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

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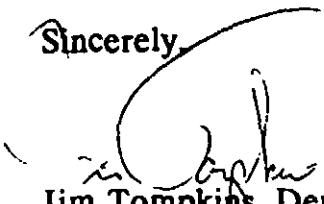
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,


Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

Hopkins[®] MALATHION

57% Emulsifiable Liquid Insecticide—B

ACCEPTED
with COMMENTS
In EPA Letter Dated
MAR 7 1994

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

ACTIVE INGREDIENT:		
Malathion*	2393-280	57.0%
INERT INGREDIENTS:		43.0%
	TOTAL	100.0%

Organophosphate Insecticide

*O,O-Dimethyl phosphorodithioate of diethyl mercaptosuccinate.
This product contains xylene-range aromatic solvents.
One gallon contains 5 pounds of Malathion.

See Below For Additional Precautionary Statements

EPA REG. NO. 2393-280

EPA EST. NO. _____

NET CONTENTS _____ GAL. (_____ L)

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

3479

WPSEX00953

STATEMENT OF PRACTICAL TREATMENT

If swallowed: Call a physician or Poison Control Center immediately. Gastric lavage may be indicated if material was taken internally. **DO NOT INDUCE VOMITING** unless other treatment is not available. Vomiting may cause aspiration pneumonia. If it is necessary to induce vomiting, give victim 1 or 2 glasses of water and insert finger in back of throat. Repeat until vomit fluid is clear. **DO NOT** induce vomiting or give anything by mouth to an unconscious person.

If on skin: Remove contaminated clothing and wash affected areas with soap and water.

If in eyes: Immediately flush eyes with plenty of water and get medical attention.

If inhaled: Remove victim to fresh air. Assist respiration as needed. Note to Physician: Empty stomach if material was taken internally. Gastric lavage may be indicated. Xylene-range aromatic solvent is an aspiration hazard. This product may cause cholinesterase inhibition. Atropine is antidotal. 2-PAM may be effective as an adjunct to atropine.

*should be
rechecked*

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS

Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Do not get in eyes, on skin or on clothing. Use only with adequate ventilation. After using this product indoors, ventilate thoroughly before occupying enclosed spaces. Do not allow contact with treated surface until sprays have dried.

Personal Protective Equipment

Applicators and other handlers must wear _____ and _____.

Applicators and other handlers must wear _____ and _____.

Applicators and other handlers must wear _____ and _____.

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Applicators and other handlers must wear _____ and _____.

Engineering controls statements

Engineering controls statements

USER SAFETY RECOMMENDATIONS

Do not eat, drink, or smoke while using this product. Wash hands before eating, drinking, or smoking. Remove clothing immediately if pesticide gets on skin. Wash thoroughly with soap and water. Wash face before eating, drinking, or smoking. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, and aquatic life stages of amphibians. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

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

PHYSICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

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

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. STORAGE: Do not use or store near heat or open flame. Keep product in original container, tightly closed and store in a cool, dry place. High temperatures may shorten shelf life of product.

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

CONTAINER DISPOSAL: See Container Label.

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.

CHEMIGATION:

Refer to supplemental labeling entitled "APPLICATION THROUGH IRRIGATION SYSTEMS—CHEMIGATION" for use directions for chemigation. Do not apply this product through any irrigation systems unless the supplemental labeling on chemigation is followed.

BEST AVAILABLE COPY

MALATHION 57%

EPA REG. NO. 2393-280

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS) for Agricultural Pesticides that is located at 29 CFR 170.101. The WPS contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. A copy of the WPS is available for viewing and printing at <http://www.epa.gov/wps>. Notification and emergency assistance information, instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry intervals (REI) are provided in this box apply to uses of this product that are covered by the Worker Protection Standard.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 2 hours.

PPE required for entry into treated areas that is deemed under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is: coveralls, chemical resistant gloves such as barrier laminate butyl rubber nitrile rubber or viton and shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (29 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep children and pets out of the treated area until sprays have dried.

BEST AVAILABLE COPY

Amount Per 100 Gals.		Amount Per Acre	
Peaches		Rice	
Aphids		(grain form)	
Green Peach		Rice leaf miner	2 1/2 pts. 7
Black Cherry		Rice stink bug	1-1 1/2 pts. 7
Black Peach		Tadpole shrimp*	3 pts.
Rusty Plum	1 pt. 7	(Cal.)	OR 1 1/2 pts. per 1/2 acre
Cottony peach scale	2 pts. 7		
Japanese beetle	1 pt. 7		
Oriental Fruit moth	2 pts. 7		
Plum curculio	2 pts. 7	Relatages	Amount Per Acre
Terrapin scale	2 pts. 7	Aphids	1 1/2 pts. 3
Peanuts	Amount Per Acre	Rye	Amount Per Acre
Leafhoppers	1 1/2 pts. 0	Armyworms	2 pts. 7
Thrips	1 1/2 pts. 0	English grain aphid	1 1/2 pts. 7
Pears	Amount Per 100 Gals.	Grasshoppers	1 1/2 pts. 7
Codling moth	2 pts. 1	Greenbugs	1 1/2 pts. 7
Fruit tree leaf roller	2 pts. 1	Safflower	Amount Per Acre
Mealybugs	1-2 pts. 1	Aphids	1 1/2-2 pts. 3
Mites	1-2 pts. 1	Grasshoppers	1 1/2-2 pts. 3
Pear psylla	1-2 pts. 1	Lygus bugs	1 1/2-2 pts. 3
Plum curculio	2 pts. 1	Salsify	Amount Per Acre
Red-banded leaf roller	2 pts. 1	Aphids	1 1/2-2 pts. 7
Pean	Amount Per Acre	Shellfish	Amount Per Acre
Aphids	1 1/2 pts. 0	Aphids	1 1/2-2 pts. 3
Pea weevil	1 1/2 pts. 0	Thrips	1 1/2-2 pts. 3
*7 day interval if vines are used as annual feed.		Soybeans	Amount Per Acre
3-day interval if vines are NOT used as annual feed.		Grasshoppers	3 pts. 7
		OR 1 1/2 pts. per 1/2 acre	
Peas	Amount Per 100 Gals.	Green cloverworm	Amount Per Acre
Aphids	1-2 pts. 0	1 1/2-3 pts. 3	
Mites	1-2 pts. 0	Mexican bean beetle	3 pts. 3
		OR 1 1/2 pts. per 1/2 acre	
Peppers	Amount Per Acre	Spinach	Amount Per Acre
Aphids	1 pt. 3	Aphids	2 pts. 7
Maggots	2 1/2 pts. 3	Squash	Amount Per Acre
OR 1 1/4 pts. per 1/2 acre		Aphids	1 1/2 pts. 1
Pineapple	Amount Per Acre	Cucumber beetle	3 pts. 1
Mealybug	1 gal. 7	OR 1 1/2 pts. per 1/2 acre	
OR 1 qt. per 1/4 acre		Pickleworm	2 pts. 1
Plums	Amount Per 100 Gals.	Spider mites	1 1/2 pts. 1
Mealy plum aphid	1 pt. 3	Squash vine borers	3 pts. 1
		OR 1 1/2 pts. per 1/2 acre	
Plums (Dormant and delayed dormant)*	Amount Per 100 Gals.	Strawberries	Amount Per Acre
Scale insects	1 pt. + 1 gal. oil	Aphids	1 1/2 pts. 3
*Make full coverage dormant or delayed dormant sprays only.		Field crickets	1 1/2-3 pts. 3
Potatoes	Amount Per Acre	Lygus bugs	1 1/2-3 pts. 3
Aphids	1 pt. 0	Potato leafhopper	1 1/2-2 1/2 pts. 3
False chinch bug	1 1/2 pts. 0	Spider mites	1 1/2 pts. 3
Leafhoppers	1 pt. 0	Spittlebug	1 1/2-3 pts. 3
Mealybugs	1 pt. 0	Strawberry leafroller	1 1/2-2 1/2 pts. 3
Prunes	Amount Per 100 Gals.	Strawberry root weevil	1 1/2 pts. 3
Bud moth	1 pt. 3	Thrips	1 1/2-3 pts. 3
Mealy plum aphid	1 pt. 3	White flies	1 1/2-2 1/2 pts. 3
Prunes (Dormant and delayed dormant)*	Amount Per 100 Gals.	Sugar Beets	Amount Per Acre
Scale insects	1 pt. + 1 gal. oil	Aphids	1 1/2-2 pts. 3
*Make full coverage dormant or delayed dormant sprays only.		Grasshoppers	3 pts. 3
		OR 1 1/2 pts. per 1/2 acre	
Pumpkins	Amount Per Acre	Mites	Amount Per Acre
Aphids	1 1/2 pts. 3	1 1/2-2 pts. 3	
Mites	1 1/2 pts. 3	Sweet Potatoes	Amount Per Acre
Squash vine borers	3 pts. 3	Leafhoppers	1 1/2-2 pts. 3
OR 1 1/2 pts. per 1/2 acre		Morning glory leafminers	2 1/2-3 pts. 3
OR 1 1/2 pts. per 1/2 acre		OR 1 1/4 to 1 1/2 pts. per 1/2 acre	
Do not apply unless plants are dry.		Swiss Chard	Amount Per Acre
Quinces	Amount Per Acre	Aphids	1 1/2-2 pts. 7
Codling moth	2 pts. 3	Tobacco	Amount Per Acre
Forbes scale	1 pt. 3	Aphids	1 1/2-2 1/2 pts. 7
Mites	1-2 pts. 3	Use maximum dosage in plant bed.	
Oriental fruit moth	2 pts. 3	Tomatoes	Amount Per Acre
Plum curculio	2 pts. 3	Aphids	1 pt. 1
Radishes	Amount Per Acre	Armyworms (Cal.)	2 1/4 pts. 3
Aphids	1 1/2-2 pts. 7	OR 1 1/4 pts. per 1/2 acre	
Relates	Amount Per Acre	Drosophila	2 1/2 pts. 1
(drying in field)		OR 1 1/4 pts. per 1/2 acre	
Dried fruit beetle	3/4 oz. per 144 sq. ft. of paper	Fruit worms (Cal.)	2 1/4 pts. 3
Rain moth	3/4 oz. per 144 sq. ft. of paper	OR 1 pt. 6 oz. per 1/4 acre	
Vinegar flies	3/4 oz. per 144 sq. ft. of paper	Spider mite	1 1/2 pts. 1
Raspberries	Amount Per 100 Gals.	Turnips	Amount Per Acre
Aphids	3 pts. 1	Aphids	1-2 pts. 3
OR 1 1/2 pts. per 50 gals.		Cabbage looper	1-2 pts. 3
Japanese beetle	1 1/2 pts. 1	Imported cabbage worm	1-2 pts. 3
Leafhoppers	1 1/2 pts. 1	Velch	Amount Per Acre
Mites	1 1/2 pts. 1	Omnivorous leaf tier	1 1/2-2 pts. 0
Rose scale	3 pts. 1	Pea aphid	1 1/2-2 pts. 0
OR 1 1/2 pts. per 50 gals.		Velch bruchid	1 1/2-2 pts. 0
Sap beetle	1 1/2-2 pts. 1	Watercress	Amount Per Acre
Thrips	1 1/2 pts. 1	Aphids	1 1/2-2 pts. 7
		Watermelons	Amount Per Acre
		Aphids	1 1/2 pts. 1
		Cucumber beetle	2 pts. 1
		Spider mites	1 1/2 pts. 1
		Wheat	Amount Per Acre
		Armyworms	2 pts. 7
		Cereal leaf beetle	1-1 1/2 pts. 7
		English grain aphid	1-1 1/2 pts. 7
		Grasshoppers	1 1/2 pts. 7
		Greenbugs	1 1/2 pts. 7

CROP	Insect Controlled	Dosage	Directions For Use	Harvest
VEGETABLES				
Cucumbers	Aphids, Armyworms, Cabbage loopers, Caterpillars, Earwigs, Garden fleahoppers, 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, Rusty mites, Serpentine leafminers, Spider mites, Thrips, Whiteflies	1 1/2-2 pts. per 100 gals.	Spray plants thoroughly. Repeat applications as necessary.	1
Watercress	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, Sowbugs, 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.

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.
Conifers	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	0.6 pts. per acre	Apply by mist blower in 2 gallons of water per acre when egg hatch is complete.

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 processed. Do not use in serving areas while food is exposed.

Insect Controlled	Dosage	Directions For Use
Adult flies	Straight Sprays: 5 Tbsps. + 1 gal. water OR 1 Cup + 2 1/2 gals. water OR 1 qt. + 12 gals. 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 Tbsp. + 7 Tbsp. 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 gals. water OR 1 qt. + 2 1/2 lbs. sugar or 1 qt. molasses (unsulfurized) or 1 qt. corn syrup + 12 gals. water	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.

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Mosquito larvae 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.

MALATHION may be toxic to certain species of fish, particularly in shallow water.

MALATHION 57% E.L. WILL PERMANENTLY DAMAGE AUTOMOBILE PAINT. CARS SHOULD NOT BE SPRAYED. IF ACCIDENTAL EXPOSURE DOES OCCUR, THE CAR SHOULD BE WASHED IMMEDIATELY.

HOUSEHOLD USES

DOMESTIC PETS		
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	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.

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.	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. OR 1/4-1 qt. per 25 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.

LIVESTOCK

CATTLE (Beef and non-milking) and Horses		
Insect Controlled	Dosage	Directions For Use
Horn fly	1 to 1 1/2 gals. 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. (For example: 1 pt. per 4 gals. 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 retreat every 2 to 3 weeks.

SHEEP AND GOATS*

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

*DO NOT APPLY TO MILKING GOATS.

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 walls. Use extreme care to thoroughly cover 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 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 pt. per 150 fl. of roost.
	4 lbs. per gal.	PREMISE TREATMENT: Apply liberally to litter, walls, ceilings, roost nests and adjacent areas. Force spray into cracks and crevices.

Fleas 4 lbs. per gal. PREMISE TREATMENT: Apply liberally to litter, walls, ceilings, roost nests and adjacent areas. Force spray into cracks and crevices.

Lice, Northern lowlife 2 lbs. per gal. per 100 to 150 birds DIRECT APPLICATION: Repeat application in 4 to 8 weeks or when necessary.

8 1/2 oz. per 15 gal. per 400 birds 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.

2 to 7 oz. per gal. of water or oil ROOST PAINT: Brush on at rate of 1 pt. per 150 fl. of roost.

4 lbs. per gal. PREMISE TREATMENT: Apply liberally to litter, walls, ceilings, roost nests and adjacent areas. Force spray into cracks and crevices.

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, Nectary, viburnum, lentens, crassula and ceanothus juniper following the use of MALATHION 57% E.L. Slight injury has also been reported on boxwood, pieris, and maidenhair ferns, petunias, small-leaf spirea, white pine and maples. Under extreme heat, drought and disease conditions the emulsifiable concentrate may cause slight damage to elms.

FLOWERS, SHADE TREES, SHRUBS

Insect Controlled	Dosage	Directions For Use
Aphids, Spidermites	1 1/2 pts. per 100 gals. OR 2 tps. per gal.	
Bagworms	2 pts. per 100 gals. OR 2 tps. per gal.	
Birch leafminer, Boxwood leafminer	2 pts. per 100 gals. OR 2 tps. per gal.	
European pine shoot moth, Four-lined leaf bug, Japanese beetle adult, Potato leafhopper, Rose leafhopper, Tarnished plant bug, Thrips	1 1/2 pts. per 100 gals. OR 2 tps. per gal.	
Lace bug	1 pt. per 100 gals. OR 2 tps. per gal.	
Mealybugs, Whiteflies	1 1/2 pts. per 100 gals. OR 2 tps. per gal.	
Oak borers	2 pts. per 100 gals. OR 2 tps. per gal.	Apply when scale crawlers have settled on foliage.
Tent caterpillar	2 pts. per 100 gals. OR 2 tps. per gal.	

SCALES

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

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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 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 sweepings. Thoroughly spray with sufficient pressure interior of empty warehouse (including cracks and protected places), outside walls to a height of 6 to 8 ft. and ground to a distance of about 6 ft. 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

Insect Controlled	Dosage	Directions For Use
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, Sawtoothed 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 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.

NUTS

ALMONDS (In-Shell and Shelled)

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 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, Sawtoothed grain beetle	1 pt. in 2 1/2 gals. of water OR 1 gal. in 19 gals. of water. 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.	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.

SUPPLEMENTAL SURFACE SPRAY: After warehouse has been filled, level surface of peanuts before spraying. Apply surface spray using 1 1/2 cups of MALATHION 37% E.L. in 2 gallons of water and apply at the rate of 2 gallons per 1000 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 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.

BULK SPRAY TREATMENT—PEANUTS GOING INTO 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 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.

RAISINS (In Storage)

Insect Controlled	Dosage	Directions For Use
Indian meal moth, Sawtoothed 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, Maize pest, Red flour beetle, Rice weevil, Rusty grain beetle, Sawtoothed 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 3/4 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	Dosage	Directions For Use
Drosophila flies	1 1/2 gals. per 100 gals. water OR 3/4 qt. per 12 1/2 gals. water	Apply as a drench using 6 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 screens. 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 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, lower parts of walls, floors under storage platforms and underneath and behind protected places. Avoid contamination of milk, dry milk, equipment, utensils, work surfaces, containers and liners. Repeat application as necessary.

NOTICE

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