



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

DEC 10 1993

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Mark Herbst
VALENT U.S.A. CORP.
1333 N. California Blvd
P.O. Box 8025
Walnut Creek, CA 94596

Subject: Label Amendment Submission of 06/18/93 in Response to PR Notice 93-7
EPA Reg. No. 59639-26
ORTHENE 75 S SOLUBLE POWDER

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. 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:

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

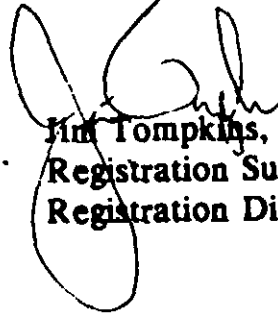
Submit the final printed labeling via the U.S. Postal Service to:

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

Admin: 59639-26

Analyst comments:

The PPE did not need to include waterproof gloves as the dermal toxicity did not call for it.

If applicators and mixers/loaders have the same PPE - except for chemical-resistant apron - then they do not need to be listed separately.

Of course if you delete waterproof gloves from PPE then you do need the mixers/loaders listing.



ORTHENE[®] 75 S Soluble Powder

(INSECTICIDE)

KEEP OUT OF REACH OF CHILDREN
CAUTION
SEE BELOW FOR ADDITIONAL
PRECAUTIONARY STATEMENTS.

Active Ingredient: Acephate (O,S-Dimethyl acetyl-phosphorothioate) 75%
Inert Ingredients: ORTHENE[®] Acephate U.S. Pat. No. 3,914,017 25%

Manufactured for Valent U.S.A. Corporation
Valent, Walnut Creek, CA 94598-0025
R Form 254-D Made in U.S.A.
EPA Reg. No. 50630-28-AA

ORTHENE KILLS FIRE ANTS

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

Harmful if swallowed. Causes eye irritation. Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray. Wash hands thoroughly after handling. Do not allow children or pets to come into contact with treated areas until sprays have dried.

STATEMENT OF PRACTICAL TREATMENT: Acephate is an organophosphate, cholinesterase inhibitor. If swallowed drink 1 or 2 glasses of water (or milk) and induce vomiting by touching the back of the throat with finger. If possible contact a physician, Poison Control Center, or emergency center before inducing vomiting. Do not induce vomiting or give anything by mouth to an unconscious person. Take person and product container to the nearest emergency treatment center. In case of eye contact, wash eyes with fresh water for 15 minutes. If irritation continues, see a doctor. For skin contact, wash skin with plenty of soap and water. If inhaled, remove person from exposure area.

Note to Physicians: Emergency Information—call 1-800-882-8888. Acephate is a cholinesterase inhibitor. If signs of cholinesterase inhibition appear, atropine is antidote. 2-PAM may also be used in conjunction with atropine but should not be used alone.

Personal Protection Equipment (PPE):

Applicators and other handlers must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks and chemical-resistant headgear for overhead exposure.

Mixers and loaders must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks and chemical-resistant headgear.

Cleaned clothing and other absorbent materials that have been drenched or heavily soiled should be removed from the premises and disposed of as waste. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds. Applications may adversely affect birds in riparian treatment areas. For terrestrial uses, do not apply directly to water, to areas where surface water is present or to low-tidal areas below the mean high water mark. Cover or soil-incorporate spills.

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

DIRECTIONS FOR USE

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

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

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. 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, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of the product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls, waterproof gloves, shoes plus socks and chemical-resistant headgear for overhead exposure.

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 (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

For other uses, including golf courses and other non-agricultural areas, do not enter treated areas without protective clothing until sprays have dried.

DIRECTIONS

Apply to ornamentals only by sprinkler irrigation systems. Do not apply by chemigation to any other crop, or this crop using any other type of irrigation system.

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Table of Equivalents

Amount of ORTHENE 75 S Soluble Powder	1 1/3 lbs.	1 lb.	2/3 lb.	4 oz.	2 oz.
Amount Active Ingredient	1 lb.	3/4 lb.	1/2 lb.	1/3 lb.	1/10 lb.

COTTON

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Cotton	Thrips	4 oz	Apply in water at 3 to 10 gals spray per acre by air minimum 5 gals/acre in CA, AZ or 10 to 25 gals spray per acre by ground. Apply when eggs or insects first appear. Repeat as necessary to maintain control. Do not feed on trash to livestock or allow animals to graze on treated areas. Lygus - Use higher rate for lygus adults that have migrated into cotton. Beltworm and Tobacco Budworm - Early season light infestation use 1/2 lb per acre and late season moderate to severe infestations use 1 to 1 1/2 lbs per acre. Apply when eggs appear and repeat at 3 to 7 day spray interval. Adult/Larvae - Moths are controlled when they come in direct contact with spray particles during application. Moth kill is most likely to occur when application is made late in the evenings during periods of peak activity. Eggs: When spray particles come in direct contact with eggs hatching larvae may be controlled as they consume and emerge from their egg casing. Pink Beltworm - Apply when insects appear and repeat at a 5 to 7 day spray interval.	2
	Planthoppers (Lygus)	1/2 to 1 1/2 lbs (CA, AZ)		
	Flies	1/2 lb		
	Cotton Aphid (Woolly)	1/2 to 1 1/2 lbs		
	Armyworm Cabbage Looper	1 1/2 lbs		
	Beltworm Tobacco Budworm Adults Larvae	1/2 to 1 1/2 lbs (East of Rockies) 1 1/2 lbs (CA, AZ)		
	Eggs (LEADMATCH™)	1 lb		
	Stinkbug (CA, AZ)	1 lb		
Pink Beltworm (CA, AZ)	1 1/2 lbs			

COTTON TANK MIXES

Crop	Insects	Amount ORTHENE 75 S + LORSBANK® Per Acre	Further Use Instructions	Days to Harvest
Cotton (CA, AZ)	Armyworm Beltworm Cabbage Looper Cotton Aphid Cutworm Flies Grasshoppers Pink Beltworm Plant Bugs (Lygus, Mirid) Saw Marsh Caterpillar Thrips Tobacco Budworm Woolly	1/3 to 1-1/3 lbs 1 to 2 pts	Do not feed on trash or treated forage to livestock. Do not allow livestock to graze on treated areas.	21

Crop	Insects	Amount ORTHENE 75 S + PYDRIN® 2.0 EC Per Acre	Further Use Instructions	Days to Harvest
Cotton (Except CA, AZ)	Tobacco Budworm	2/3 lb 2-2/3 oz	Begin applications when eggs or insects appear and apply as needed to maintain control. Apply in 3 to 5 gals of water with aerial equipment or in 10 to 25 gals of water with ground equipment. Do not feed on trash to livestock or allow animals to graze treated areas. Do not apply more than two (2) lbs active ingredient of PYDRIN to a crop in a growing season. All applicable directions, restrictions and precautions on the EPA registered labels are to be followed.	21

COTTON SEED HOPPER BOX TREATMENT (EXCEPT AZ, CA AND THE BLACK LANDS OF TEXAS)

Crop	Insects	Amount ORTHENE 75 S Soluble Powder Per Acre	Further Use Instructions
Cotton	Thrips Cotton Aphids Black (Green)	3 to 4 oz	Apply 3 to 4 oz. ORTHENE 75 S Soluble Powder per acre in the planter box as a dry powder. Even coverage is required for acceptable insect control. To obtain even coverage, fill planter box 1/2 full of seed, add the proper amount of ORTHENE 75 S Soluble Powder and mix thoroughly with a stick. Add the remainder of the seed to the planter box and the additional required amount of ORTHENE 75 S Soluble Powder followed by thorough mixing. For improved mixing, pre-mix seed with ORTHENE 75 S Soluble Powder in a suitable container, then pour treated seed into planter box. Loss of ORTHENE 75 S Soluble Powder will occur if air planters are used. Plants grown from improperly covered seed will not exhibit insect control. Do not use treated seed for food or feed purposes or process for oil.

RECEIVED
with COMMENTS
EPA Letter Dated

DEC 10 1993

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, or the pesticide registered under EPA Reg. No. 59639-26

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COTTON IN-FURROW APPLICATION

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions												
Cotton	Aphids Thrips Beet (Greasy) Cutworm (Except CA)	0.5 to 1.0 lb. active	<p>Refer to the ORTHENE 75 S conversion chart before making product application</p> <p>ORTHENE 75 S CONVERSION CHART</p> <p>LBS. A.I. TO OZ. FORMULATED PRODUCT</p> <table border="1"> <tr><td>0.5</td><td>10.7</td></tr> <tr><td>0.6</td><td>12.8</td></tr> <tr><td>0.7</td><td>14.9</td></tr> <tr><td>0.8</td><td>17.0</td></tr> <tr><td>0.9</td><td>19.2</td></tr> <tr><td>1.0</td><td>21.3</td></tr> </table> <p>Apply 0.5 to 1.0 lb. active ORTHENE 75 S in 3 to 5 gals. of water per acre as an in-furrow spray.</p> <p>NOTE: 1 lb. of the Blendable Wettable Granules of Thione are only the 1.0 lb. active ORTHENE 75 S rate (21.3 oz. formulated product per acre). ORTHENE 75 S can be mixed with fungicides that are sprayed in-furrow for disease control.</p> <p>Flat-fan nozzles used for in-furrow application should be set so that the fanned spray pattern is aligned with the row to insure good spray deposition in the seed furrow. Lane type nozzles may not provide a spray pattern that insures maximum spray deposition in the seed furrow, and should be avoided. Spray systems that employ metal or plastic tubing for delivery of spray solution into the seed furrow should have tubing securely fastened to the furrow opener and should be checked frequently to insure that the tubing is properly positioned to deposit spray solution into the seed furrow.</p>	0.5	10.7	0.6	12.8	0.7	14.9	0.8	17.0	0.9	19.2	1.0	21.3
0.5	10.7														
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0.8	17.0														
0.9	19.2														
1.0	21.3														

FIELD CROPS

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Peppermint Spearmint	Alabama leaper Cutworms Aphids	1 1/2 lbs.	<p>Apply in water at 5 to 10 gals. spray per acre by air or 20 to 30 gals. spray per acre by ground.</p> <p>Apply when eggs or insects first appear. Make one repeat application, if necessary, to maintain control.</p> <p>Do not apply more than 2 1/2 lbs. per acre per season.</p> <p>Do not use spent mint hay for feed for dairy animals.</p>	14
Soybeans	Grasshoppers	1/2 to 1/2 lb.	<p>Apply in water at 2 to 10 gals. spray per acre by air or 20 to 30 gals. spray per acre by ground. Repeat as necessary to maintain control.</p> <p>Do not graze or cut vines for hay or forage.</p>	14
	Soybean leaper Cabbage leaper Green Cloverworm Velvetbean -caterpillar Beet leaf beetle Mexican leaf beetle	1/2 to 1 1/2 lbs.		
	Silver Spotted Skipper (Except CA)	1 lb.		
Peanuts	Sunk bugs Armyworms Threecornered alfalfa hopper Corn Earworm	1 to 1 1/2 lbs.	<p>Apply in water at 10 to 20 gals. spray per acre by ground or in 5 to 10 gals. spray per acre by air.</p> <p>Begin applications when insects first appear and repeat as needed to maintain control.</p> <p>Do not feed treated forage or hay to livestock or allow animals to graze treated areas.</p>	14 (at digging)
	Thrips	1/2 to 1 lb.		
Peanuts	Grasshoppers	1/2 to 1/2 lb.	<p>Apply in water at 10 to 20 gals. spray per acre by ground or in 5 to 10 gals. spray per acre by air.</p> <p>Begin applications when insects first appear and repeat as needed to maintain control.</p> <p>Do not feed treated forage or hay to livestock or allow animals to graze treated areas.</p>	14 (at digging)
	Thrips	1/2 to 1 lb.		
Peanuts	Corn earworm Fall armyworm Leafhoppers Leppers Velvetbean caterpillar	1 to 1 1/2 lbs.	<p>Apply in water at 10 to 20 gals. spray per acre by ground or in 5 to 10 gals. spray per acre by air.</p> <p>Begin applications when insects first appear and repeat as needed to maintain control.</p> <p>Do not feed treated forage or hay to livestock or allow animals to graze treated areas.</p>	14 (at digging)

**TBACCO
TBACCO TRANSPLANT WATER APPLICATION (EXCEPT CA)**

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions
Tobacco	Fla Beetle Green Peach Aphid Tobacco Aphid Cutworms Tobacco Thrips	1 lb.	<p>Provides control of early season flea beetles, green peach aphid, tobacco aphid, and cutworm for approximately 3 to 4 weeks after transplanting. For later season control of these insects, apply a later spray of ORTHENE 75 S Soluble Powder.</p> <p>Apply in a minimum of 100 gals. of transplant water per acre.</p> <p>Do not apply more than 1 lb. ORTHENE 75 S Soluble Powder per acre as a transplant water application as some phytotoxicity may occur.</p>

TBACCO FOLIAR APPLICATION (EXCEPT CA)

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Tobacco (Flue-Cured, Air Cured, Dark Fire Cured)	Grasshoppers	1/2 to 1/2 lb.	<p>Apply in 30 to 50 gals. water per acre with ground equipment or a minimum of 3 gals. per acre by air.</p> <p>Apply on a 7 day schedule or as needed.</p> <p>Do not re-entr sprayed areas until the spray deposit has dried.</p>	3
	Green Peach Aphid Fla Beetle Hornworm Tobacco Thrips	1/2 lb.		
	Tobacco Aphid Vegetable Weevils Stinkbugs	1/2 to 1 lb.		
	Budworm Cabbage Looper Cutworm	1 lb.		

TBACCO PLANT BED APPLICATION (EXCEPT CA)

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions
Tobacco Bed Treatment	Fla Beetle Green Peach Aphid Tobacco Aphid Cutworm	1 lb.	<p>Apply to foliage at the equivalent of 1 tablespoon in 1 gal. of water per every 1000 sq. ft. of bed. Apply evenly to insure thorough coverage.</p>

GREENHOUSE APPLICATION (EXCEPT CA)

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions
Tobacco	Cutworm Fla Beetle Green Peach Aphid Tobacco Aphid	1 lb.	<p>Apply to foliage at the equivalent of 1 tablespoon in 3 gals. water per every 1000 sq. ft. of bed. Apply evenly to insure thorough coverage.</p> <p>NOTE: Fleathered water should be disposed of in the unplanted field through the transplant water or through later spray.</p>

TBACCO SOIL APPLICATION (EXCEPT CA)

Crop	Insects	Amount ORTHENE 75 S	Further Use Instructions	Days to Harvest
Tobacco	Impaired Fire Ants	Blended Treatment-Bait Method: Evenly distribute 1 to 2 teaspoons over the mound. Bait Method: Mix 1 oz. in 5 gals. of water. Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	<p>For best results apply the material in the early morning or late afternoon when the ants are most active.</p> <p>Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.</p> <p>Treat maximum of 13 mounds per acre.</p> <p>Do not treat more than once per season.</p>	3

FRUIT CROPS

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Cranberries	Cranberry Blossom Worm Syrphid Moth False Armyworm Fireworm Spanworm Sporogonids	1-1/2 lbs.	<p>Apply in water by air, ground or with sprinklers.</p> <p>Use a minimum of 2 gals. spray per acre by air. Use sufficient water to give thorough coverage with ground or sprinkler equipment.</p> <p>Note: Limit to one application per growing season.</p> <p>Do not apply from start of bloom until all berries set.</p>	90

SPRINKLER IRRIGATION APPLICATION TO CRANBERRIES:

This product may only be applied through or under irrigation systems including center pivot, lateral move, and low zone wheel roll, travelert, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution or treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place. A person knowledgeable of the changeover system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system mainline to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump starts.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Solid Set Systems: Apply specified dosage for the entire length of the irrigation period or for a 30 to 60 minute period at the end of a regular irrigation set or as a 30 to 60 minute system as a separate application not associated with a regular irrigation. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water to ensure the lines are flushed and free of remaining pesticide. A dye indicator may be injected into the lines to mark the end of the application period. See **NOTE**.

Center Pivot Systems: Inject the specified dosage per acre continuously for one complete revolution of the system. See **NOTE**.

NOTE: Constant rotation must be maintained in the chemical supply tank during the entire period of insecticide application. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing.

Application of more than label-recommended quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness.

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VEGETABLE CROPS

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Beans and Lima Beans (Dry and Succulent forms)	Feasappers Grasshoppers	1.3 to 2.3 lb	Apply in water at a minimum of 2 gals. spray per acre by air or 20 to 100 gals. spray per acre by ground	1 (snapbeans or dry beans)
	Aphids Bean leaf beetle Bean leafhopper Cabbage looper Cutworms Green Caterworm Leafhoppers Mexican bean beetle Peanutbug (lygus) Soybean looper Thrips Whitefly	2.3 to 1-1/3 lbs	Apply when eggs or insects first appear. Repeat at 7 to 10 day intervals as necessary. Severe insect infestations, use higher rates. Do not feed treated vines to livestock	Dilma beans - succulent form
Brussels Sprouts Cauliflower	Green peach aphid	2.3 to 1-1/3 lbs	Apply in water at 25 to 150 gals. spray per acre by ground or a minimum of 5 gal. spray per acre by air	14
	Cabbage looper Diamondback moth Imported cabbage worm	1-1/3 lbs	Use the high rate when heavy infestations of aphids are present. Begin applications when insects or eggs first appear. Repeat application as needed. Do not apply more than 8 lbs. per acre per season to Brussels Sprouts. Do not feed trimmings to livestock or allow animals to graze in treated areas.	
Celery	Green peach aphid	2.3 to 1-1/3 lbs	Apply in water at 50 to 100 gals. spray per acre by ground or in a minimum of 5 gals. per acre by air	21
	Beet and Fall armyworms Cabbage looper	1-1/3 lbs	Apply when eggs or insects appear and repeat at 3 to 10 day intervals as necessary to maintain control. Trim plants (leaves removed) before shipment or use. Do not use trimming (if not for food or feed)	
Head Lettuce (Crisphead type Only)	Aster Leafhopper Green peach aphid	2.3 to 1-1/3 lbs	Apply in water at 5 to 10 gals. spray per acre by air or 10 to 60 gals. spray per acre (broadcast) by ground	21 Spring, summer and early fall crops in all areas and winter crops in Florida and Texas, late fall crops in Arizona, winter crops in Arizona and California
	Cabbage looper Armyworms	1-1/3 lbs	Apply as necessary to maintain desired control. Do not apply more than 5-7.3 lbs. per acre per season. Do not apply after first head begins to form to crops which germinate from mid-September through November in desert areas of AZ and CA. Do not feed trimmings to livestock or allow animals to graze on treated areas.	
Peppers (non-bell type)	Aphids	2.3 lb	For use in Midwestern, Eastern States and Puerto Rico only. Apply in water at 40 to 150 gals. spray per acre with ground equipment. Repeat at 7 to 10 day intervals as necessary. Do not exceed 7 applications per season.	7
Sweet peppers (Bell type)	Grasshoppers	1.3 to 2.3 lb	Apply in water at a minimum of 3 gals. spray per acre by air or 25 to 150 gals. spray per acre by ground	7
	Cabbage looper Green peach aphid Tobacco hornworm	2.3 to 1-1/3 lbs	Apply when eggs or insects appear. Repeat as necessary until insects have been reduced below economic numbers.	
	European corn borer	1 to 1-1/3 lbs		

PASTURE, RANGELAND, WASTELAND

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Pasture, Rangeland, Wasteland	Grasshoppers Mormon Crickets Black Grass Bugs	1/8 to 1/4 lb (8.8% to 0.125 lb active ingredient)	Apply in water at a minimum of 1/2 gal. spray per acre by air or 10 to 20 gals. spray per acre by ground. Use the higher rate in thicker vegetation or on larger insects. An approved drift retardant additive may be added to aid in controlling drift and reducing evaporation of aerial sprays. Do not make more than one application per season. Do not apply when lactating dairy cattle are present. Do not graze or feed grass or grass hay to dairy animals. Remove most animals from treated areas at least one day before slaughter if they were present at application or grazed treated areas within 21 days after application.	21 for hay

(Continued)

PASTURE, RANGELAND, WASTELAND

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Pasture, Rangeland, Wasteland	Imported Fire Ants	Mound Treatment - Dry Method: Evenly distribute 1 to 2 teaspoons over the mound. Drench Method: Mix 1 oz. in 5 gals. of water. Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	For best results apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest. Grass in treated area may be injured. Treat maximum of 13 mounds per acre. Do not treat mounds more than once per season. Do not apply when lactating dairy cattle are present. Do not graze or feed grass or grass hay to dairy animals. Remove most animals from treated areas at least one day before slaughter if they were present at application or grazed treated areas within 21 days after application.	21

SPECIALTY USES

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions
Non-Crop Areas (field borders, fence rows, roadsides, ditchbanks, and borrow pits)	Grasshoppers	1/2 lb (25 lb active ingredient)	For early to mid-season application to grasshoppers in field borders, fence rows, roadsides, ditchbanks, and borrow pits. Apply in 1 to 5 gals. of water by air, or in 10 to 20 gals. of water with ground equipment. Use the higher volumes when spraying heavier foliage. Do not graze or feed vegetation cut from treated areas.

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions
Non-Crop Areas	Imported Fire Ants	Mound Treatment - Dry Method: Evenly distribute 1 to 2 teaspoons over the mound. Drench Method: Mix 1 oz. in 5 gals. of water. Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	For best results apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest. Grass in treated area may be injured. Do not treat at mound more than once per season.

Plants	Insects	Amount ORTHENE 75 S Per 100 Gals.	Time of Application	Recommended Application
Container Grown Nursery Stock (Arbutus, Azalea, Camelia, Rhododendron, Roses, Viburnum, Yew)	Black Vine Weevil Strawberry Root Weevil	1 lb (16 oz)	Application should be made by mid-September for greenhouse stock and by mid-October for outdoor stock. Consult your local county extension agent for information on the identification and control of root weevils on ornamentals.	Apply the specified amount of ORTHENE 75 S Soluble Powder per 100 gals. of solution so as to thoroughly drench the root system.
	Imported Fire Ants	1 lb (16 oz)	Apply as needed to control the pest.	

SMALL SPRAY EQUIPMENT

Label Recommendation ORTHENE in 100 Gals. Water	Equivalent ORTHENE in 20 Gals. Water*	Equivalent ORTHENE in 1 Gal. Water (imp. Gal.)
1/8 lb	2-1/2 oz	1
2/3 lb	5 oz	2
1 lb	7-1/2 oz	3
1-1/3 lbs	10 oz	4

*Use in 16 oz. measuring cup

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Continued

TREES AND SHRUBS

Plants	Insects	Amount ORTHENE 75 S Per 100 Gals	Time of Application	Recommended Application
Trees and Shrubs (Except Flowering Crab apple, see below)	Aphids Bagworms Birch Leafminers Caterpillar Lice Bugs Leafhoppers	1.3 lb (5.3 oz)	As the insects begin to appear	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals. water with a hydraulic sprayer. The design of a substitute sprayer improves control of Gypsy Moth larvae. *Most effective application. Adult rates for 1.3 lbs. per 100 gals. water for Gypsy Moth control and 1.0 lb. per 100 gals. water for lent Caterpillar control. Do not apply to Huckleberry, Bark of Ginkgo, Cotoneaster, Lombardy Poplar and Viburnum suspensum.
	Douglas Fir Tussock Moth Larvae Gypsy Moth Larvae Webworms	2.3 lb (10.5 oz)	As the insects begin to appear	Nursery crops. Before treating large plantings, spray only a few plants and observe two weeks for phytotoxicity.
	Scars (Crawlers)	2.3 lb (10.5 oz)	As crawlers begin to appear. Repeat applications, at a 2 week or more interval, may be necessary where there is continuous crawler production.	
Trees and Shrubs	Pandora Pine Needle Miner	2.3 lb (10.5 oz)	Time of application is important. Consult your Farm Advisor or County Extension Agent.	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals. water with a hydraulic sprayer as a full coverage spray.
	Grasshoppers	2.3 lb (10.5 oz)	As the grasshoppers begin to appear	
	California Oakworm Caterpillars (Spring and Fall)	1.3 to 2.3 lb (5.3 to 10.5 oz)	As the insects begin to appear. Use the higher amount when the larger larvae are present.	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals. water with a hydraulic sprayer.
	Hemlock Pine Tip Moth Larvae	1 lb (16 oz)	Time of application is important. Consult your Farm Advisor or County Extension Agent. Repeat applications will be required for subsequent generations.	
	Root Weevil Adults	1 lb (16 oz)	Apply when first feeding damage occurs. Repeat applications, at four week intervals until the first heavy frost, may be necessary for complete foliage protection.	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals. water with a hydraulic sprayer as a full coverage spray.
	Box Elder Bugs Sawflies Boxworms Leafhoppers	1 lb (16 oz)	As the insects begin to appear	
	Japanese Beetle	1-1.3 lbs (2.13 oz)	As the Japanese Beetles begin to appear. Repeat applications, at 2 week intervals, may be necessary.	
Elm Leaf Beetle (Harvest)	1-1/2 lb (21.3 oz)	As the larvae begin to appear ORTHENE will not prevent Elm Leaf Beetle eggs from hatching.		
Douglas Fir (Christmas Trees)	Douglas Fir Needle Miner	1/2 lb (10.7 oz)	Application should be made no more than 2 weeks prior to bud burst. For additional pest management information, consult your County Extension Service.	Apply the specified amount of ORTHENE 75 S Soluble Powder in not less than 2 gals. of spray per acre by air or in 100 gals. of spray per acre by ground.
Flowering Crabapples	Aphids Tort Caterpillars Leafhoppers	1/2 lb (5.3 oz)	As the insects begin to appear	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals. water with a hydraulic sprayer. Do not apply more than 3 times in a growing season at a 4 week interval. Caution: Phytotoxicity has occurred on the following Crabapple varieties: Hana, Idoness, Marquand, Pink Perfection, Red Wing and Snow Cloud.
Crape Myrtle	Aphids	3 to 4 level lbs. (11 or 14 oz.) per 1 Tbs. of water.	As aphids begin to appear.	Make a paste-on slurry by mixing the specified amount of ORTHENE 75 S Soluble Powder with 1 tablespoon of water. Remove the paste from the trunk areas to be treated. Completely paint a band around each trunk to a width twice its diameter. Application should be made to trunks within 2 to 12 inches above the ground and below the point where branching begins. For multi-trunk plants be certain to treat all trunks. For other single or multi-trunk plants, application should be made as low as possible within the recommended treatment zone.



COMMERCIAL TURFGRASS, LAWNS, AND OTHER RECREATIONAL TURFGRASS AREAS DO NOT ALLOW LIVESTOCK TO GRAZE TREATED AREAS. DO NOT FEED TREATED GRASS TO LIVESTOCK

Plant	Insects	Amount ORTHENE 75 S Per 1000 Sq. Ft.	Time of Application	Recommended Application
Turfgrass (Residential & Commercial)	Fall Armyworm Yellow-striped Armyworm Southern Armyworm	1/2 to 1.2 oz (1 1/2 to 3 1/2 lbs per acre)	As the insects appear. A repeat application at 2 week intervals may be necessary.	Apply the specified amount of ORTHENE 75 S Soluble Powder per 1000 sq. ft. Use a minimum of 5 gals. water per 1000 sq. ft. to obtain good coverage.
	Catworm	1.2 to 2.4 oz (3 1/2 to 6 1/2 lbs per acre)		
	Crunch Bugs	1.2 to 2.4 oz (3 1/2 to 6 1/2 lbs per acre)	Apply as needed to adult population in July down to 14 60-51	Apply the specified amount of ORTHENE 75 S Soluble Powder per 1000 sq. ft. Use 1 to 15 gals. water per 1000 sq. ft. to obtain good coverage.
	Flies	1.2 to 2.4 oz	Apply as needed for knockdown (7 to 10 days) only of existing adult populations.	
	Soil Webworm (Clematis spp.)	1/2 to 1 oz (1 1/2 to 2 1/2 lbs per acre)	As soil webworms begin to appear. Use the higher amount when knock-down is needed or with heavy infestations.	Repeat application may be necessary. Do not repeat at more than 1 week intervals.
	Leafhopper	1 oz. (2 1/2 lbs. per acre)	As leafhoppers begin to appear. A repeat application at 1 week intervals may be necessary.	
	Mole Crickets (Except CA)	1.0 to 1.9 oz. (2.00-5.2 lbs per acre)	As mole crickets begin to appear. For knockdown of existing populations, more than one application may be required throughout the growing season. For heavy infestations, use the higher dosage rate.	Apply the specified amount of ORTHENE 75 S Soluble Powder per 1000 sq. ft. Use 1 to 15 gals. water per 1000 sq. ft. to obtain good coverage. Apply during late afternoon or early evening hours and after an irrigation. Do not irrigate after application. The use of a lemon fragrance substance in the spray mix may enhance control by acting as a flushing agent and thus provide increased mole cricket contact with the ORTHENE 75 S Soluble Powder. The following lemon-scented products have been shown to be effective flushing agents: Lemon Joy, Lemon Palmolive, and Mighty Myrt Products Manufacture—Bee Pure Lemon Fragrance. The use rate for these lemon-scented products is 2 teaspoons per gallon of water for small total mix volumes or 6 fl. oz. per 50 gals. of water for large total mix volumes.
Greenbug (Stenobothrus pennsylvanicus) Grasshoppers	1/2 oz. (1 1/2 lbs per acre)	Apply when insects or their damage first appears. Repeat as necessary. Application should not be repeated at more than 1 week intervals.	Apply the specified amount of ORTHENE 75 S Soluble Powder. Use 4 gals. of water per 1000 sq. ft. to obtain good coverage. Do not water turfgrass for at least 24 hours after application.	
Dichondra	Catworm Flea Beetle Southern Armyworm Yellow-striped Armyworm	10 to 19 oz (27 to 5.2 lbs per acre)	As the insects appear. Repeat at 2 week intervals as necessary.	Apply the specified amount of ORTHENE 75 S per 1000 sq. ft. Use a minimum of 15 gals. of water per 1000 sq. ft. to obtain good coverage.

Plant	Insects	Amount ORTHENE 75 S	Time of Application	Recommended Application
Turfgrass	Imported Fire Ants	Minimal Treatment—Dry Method: Evenly distribute 1 to 2 teaspoons over the mound. Wet Method: Mix 1 oz. in 5 gals. of water. Apply 1 gal. of mix to each mound area by spreading the mound until it is wet and treat a four (4) foot diameter circle around the mound.	For best results apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.	Apply the specified amount of ORTHENE 75 S Soluble Powder as directed. Grass in treated areas may be mowed. Do not treat mound more than once per season.

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PM14 59639-26

Labeling
10/7



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

DEC 10 1993

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Mark Herbst
VALENT U.S.A. CORP.
1333 N. California Blvd
P.O. Box 8025
Walnut Creek, CA 94596

Subject: Label Amendment Submission of 06/18/93 in Response to PR Notice 93-7
EPA Reg. No. 59639-26
ORTHENE 75 S SOLUBLE POWDER

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. 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:

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

20/17

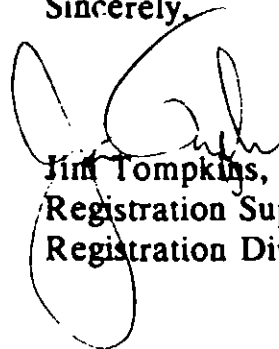
Submit the final printed labeling via the U.S. Postal Service to:

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



ORTHENE[®] 75 S Soluble Powder

(INSECTICIDE)

KEEP OUT OF REACH OF CHILDREN
CAUTION
SEE BELOW FOR ADDITIONAL
PRECAUTIONARY STATEMENTS.

Active ingredient: Acephate (O,S-Dimethyl acetyl-phosphorothioate) 75%
Inert ingredients 25%
*ORTHENE[®] Acephate
U.S. Pat. No. 3,314,417

Manufactured for
Valent U.S.A. Corporation
Walnut Creek, CA 94596-8925
R. Farm 254-D Made in U.S.A.
EPA Reg. No. 59639-26-AA

ORTHENE KILLS FIRE ANTS

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

Harmful if swallowed. Causes eye irritation. Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray mist. Wash hands thoroughly after handling. Do not allow children or pets to come into contact with treated areas until sprays have dried.

STATEMENT OF PRACTICAL TREATMENT: Acephate is an organophosphorus, cholinesterase inhibitor. If swallowed, drink 1 or 2 glasses of water (or milk) and induce vomiting by touching the back of the throat with finger if possible, contact a physician, Poison Control Center, or emergency center before inducing vomiting. Do not induce vomiting or give anything by mouth to an unconscious person. Take person and product container to the nearest emergency treatment center. In case of eye contact, wash eyes with fresh water for 15 minutes. If irritation continues, see a doctor. For skin contact, wash skin with plenty of soap and water. If inhaled, remove person from exposure area.

Notes to Physicians: Emergency information—call 1-800-852-0099. Acephate is a cholinesterase inhibitor. If signs of cholinesterase inhibition appear, atropine is antidotal. 2-PAM may also be used in conjunction with atropine but should not be used alone.

Personal Protection Equipment (PPE):

Applicators and other handlers must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks and chemical-resistant headgear for overhead exposure.

Mixers and Loaders must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks and chemical-resistant headgear.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

Users should

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds. Applications may adversely affect birds in riparian treatment areas. For riparian uses, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Cover or soil-incorporate soils.

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

DIRECTIONS FOR USE

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

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

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. 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, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls, waterproof gloves, shoes plus socks and chemical-resistant headgear for overhead exposure.

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 (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

For other uses, including golf courses and other non-agricultural areas, do not enter treated areas without protective clothing until sprays have dried.

DIRECTIONS

Apply to cranberries only by sprinkler irrigation systems. Do not apply by chemigation to any other crop, or this crop using any other type of irrigation system.

Table of Equivalents

Amount of ORTHENE 75 S Soluble Powder	1 1/3 lbs.	1 lb	2/3 lb	4 oz.	2 oz.
Amount Active Contained	1 lb	3/4 lb	1/2 lb	1/5 lb	1/10 lb

COTTON

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Cotton	Thrips	4 oz.	Apply in water at 3 to 10 gals spray per acre or, at minimum, 5 gals/acre in CA, AZ; or 10 to 25 gals spray per acre by ground.	21
	Planthugs (lygus)	1 to 1 1/2 lbs (CA, AZ)		
	Fleashopper	1 lb		
	Cotton Aphid Whitefly	1 to 1 1/2 lbs		
	Armyworm Cabbage looper	1 1/2 lbs		
	Bollworm Budworm Adults Larvae	1/2 to 1 1/2 lbs (East of Rockies) 1 1/2 lbs (CA, AZ)		
	Eggs/ DEADHATCH™			
	Stinkbugs (CA, AZ)	1 lb		
	Pink Bollworm (CA, AZ)	1 1/2 lbs		
		Do not feed gin trash to livestock or allow animals to graze on treated areas.		
		Lygus—Use higher rate for lygus adults that have migrated into cotton.		
		Bollworm and Tobacco Budworm—Early season high: irrigation use 1 1/2 lbs per acre. Mid and late season moderate to severe infestations use 1 to 1 1/2 lbs per acre. Apply when eggs appear and repeat at 3 to 7 day spray intervals.		
		Adult/Larvae: Moths are controlled when they come in direct contact with spray particles during application. Moth kill is most likely to occur when application is made late in the evenings during periods of peak activity.		
		Eggs: When spray particles come in direct contact with eggs hatching larvae may be controlled as they consume and emerge from their egg casing.		
		Pink Bollworm—Apply when insects appear and repeat at a 5 to 7 day spray interval.		

COTTON TANK MIXES

Crop	Insects	Amount ORTHENE 75 S + LORSBAN 94E Per Acre	Further Use Instructions	Days to Harvest
Cotton (CA, AZ)	Armyworms Bollworm Cabbage Looper Cotton Aphid Cutworms Fleashopper Grasshoppers Pink Bollworm Plant Bugs (Lygus, Mirids) Salt Marsh Caterpillar Thrips Tobacco Budworm Whitefly	1/3 to 1 1/3 lbs 1 to 2 pts	Do not feed gin trash or treated forage to livestock. Do not allow livestock to graze on treated areas.	21

Crop	Insects	Amount ORTHENE 75 S + PYDRIN 2.4 EC Per Acre	Further Use Instructions	Days to Harvest
Cotton (Except CA, AZ)	Tobacco Budworm	2/3 lb 2-2/3 fl oz	Begin applications when eggs or insects appear and apply as needed to maintain control. Apply in 3 to 5 gals of water with aerial equipment or in 10 to 25 gals of water with ground equipment. Do not feed gin trash to livestock or allow animals to graze treated areas. Do not apply more than two (2) lbs active ingredient of PYDRIN to a crop in a growing season. All applicable directions, restrictions and precautions on the EPA registered labels are to be followed.	21

COTTON SEED HOPPER BOX TREATMENT (EXCEPT AZ, CA AND THE BLACK LANDS OF TEXAS)

Crop	Insects	Amount ORTHENE 75 S Soluble Powder Per Acre	Further Use Instructions
Cotton	Thrips Cotton Aphids Blackleg Cotton	3 to 4 oz	Apply 3 to 4 oz ORTHENE 75 S Soluble Powder per acre in the planter box as a dry powder. Even coverage is required for acceptable insect control. To obtain even coverage, fill planter box 1/2 full of seed, add the proper amount of ORTHENE 75 S Soluble Powder and mix thoroughly with a stick. Add the remainder of the seed to the planter box and the additional required amount of ORTHENE 75 S Soluble Powder followed by thorough mixing. For improved mixing, pre-mix seed with ORTHENE 75 S Soluble Powder in a suitable container, then pour treated seed into planter box. Loss of ORTHENE 75 S Soluble Powder will occur if the planter box is used. Plants grown from improperly covered seed will not obtain insect control. Do not use treated seed for food or feed purposes or process for

RECEIVED
with COMMENTS
In EPA Letter Dated

DEC 1 0 1993

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 59639-26

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COTTON IN-FURROW APPLICATION

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions												
Cotton	Aphids Thrips Black (Greasy) Cutworm (Except CA)	0.5 to 1.0 lb active	<p>Refer to the ORTHENE 75 S conversion chart before making product application</p> <p>ORTHENE 75 S CONVERSION CHART</p> <p>LBS. A. I. TO OZ. FORMULATED PRODUCT</p> <table border="1"> <tr><td>0.5</td><td>10.7</td></tr> <tr><td>0.6</td><td>12.8</td></tr> <tr><td>0.7</td><td>14.9</td></tr> <tr><td>0.8</td><td>17.0</td></tr> <tr><td>0.9</td><td>19.2</td></tr> <tr><td>1.0</td><td>21.3</td></tr> </table> <p>Apply 0.5 to 1.0 lb active ORTHENE 75 S in 3 to 5 gals. of water per acre as an in-furrow spray</p> <p>NOTE: For the (Black) of Texas use only the 1.0 lb. active ORTHENE 75 S rate (21.3 oz. formulated product per acre.) ORTHENE 75 S can be mixed with fungicides that are sprayed in-furrow for disease control</p> <p>Foliar nozzles used for in-furrow application should be set so that the fanned spray pattern is aligned with the row to insure good spray deposition in the seed furrow. Cone type nozzles may not provide a spray pattern that insures maximum spray deposition in the seed furrow, and should be avoided. Spray systems that employ metal or plastic tubing for delivery of spray solution into the seed furrow should have tubing securely fastened to the furrow opener and should be checked frequently to insure that the tubing is properly positioned to deposit spray solution into the seed furrow.</p>	0.5	10.7	0.6	12.8	0.7	14.9	0.8	17.0	0.9	19.2	1.0	21.3
0.5	10.7														
0.6	12.8														
0.7	14.9														
0.8	17.0														
0.9	19.2														
1.0	21.3														

FIELD CROPS

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Peppermint Sagebrush	Affalfa looper Cutworms Aphids	1 1/2 lbs	<p>Apply in water at 5 to 10 gals spray per acre by air or 20 to 100 gal. spray per acre by ground</p> <p>Apply when eggs or insects first appear. Make one repeat application, if necessary, to maintain control.</p> <p>Do not apply more than 2 1/2 lbs per acre per season.</p> <p>Do not use spent mint hay for feed or dairy animals.</p>	14
Soybeans	Grasshoppers Soybean looper Cabbage looper Green Cloverworm Velvetbean caterpillar Bean leaf beetle Mexican bean beetle	1/2 to 1/2 lb	<p>Apply in water at 2 to 10 gals spray per acre by air or 10 to 50 gals. spray per acre by ground. Repeat as necessary to maintain control.</p> <p>Do not graze or cut vines for hay or forage.</p>	14
	Silver Spotted Skipper (Except CA)	1 lb		
	Stink bugs Armyworms Three-cornered alfalfa hopper Corn Earworm	1 to 1 1/2 lbs		
Peanuts	Grasshoppers Thrips Corn earworm Fall armyworm Leafhoppers Loopers Velvetbean caterpillar	1/2 to 1/2 lb 1/2 to 1 lb 1 to 1 1/2 lbs	<p>Apply in water at 10 to 50 gals spray per acre by ground or in 5 to 10 gals. spray per acre by air</p> <p>Begin applications when insects first appear and repeat as needed to maintain control.</p> <p>Do not feed treated forage or hay to livestock or allow animals to graze treated areas.</p>	14 (of digging)

TOBACCO
TOBACCO TRANSPLANT WATER APPLICATION (EXCEPT CA)

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions
Tobacco	Flea Beetle Green Peach Aphid Tobacco Aphid Cutworms Tobacco Thrips	1 lb	<p>Provides control of early season flea beetles, green peach aphids, tobacco aphids, and cutworms for approximately 3 to 4 weeks after transplanting. For later season control of these insects, apply a foliar spray of ORTHENE 75 S Soluble Powder.</p> <p>Apply in a minimum of 100 gals of transplant water per acre.</p> <p>Do not apply more than 1 lb ORTHENE 75 S Soluble Powder per acre as a transplant water application as some phytotoxicity may occur.</p>

TOBACCO FOLIAR APPLICATION (EXCEPT CA)

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Tobacco (Flue-Cured, Air-Cured, Dark Fire Cured)	Grasshoppers Green Peach Aphid Flea Beetle Homworm Tobacco Thrips	1/2 to 1/2 lb 1/2 lb	<p>Apply in 10 to 50 gals water per acre with ground equipment or a minimum of 3 gals. per acre by air.</p> <p>Apply on a 7 day schedule or as needed.</p> <p>Do not re-enter sprayed areas until the spray deposit has dried.</p>	3
	Tobacco Aphid Vegetable Weevils Stinkbugs	1/2 to 1 lb		
	Budworm Cabbage Looper Cutworm	1 lb		

TOBACCO PLANT BED APPLICATION (EXCEPT CA)

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions
Tobacco Bed Treatment	Flea Beetle Green Peach Aphid Tobacco Aphid Cutworm	1 lb	<p>Apply to foliage at the equivalent of 1 tablespoon in 1 gal of water per every 1,000 sq ft of bed. Apply evenly to insure thorough coverage.</p>

GREENHOUSE APPLICATION (EXCEPT CA)

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions
Tobacco	Cutworm Flea Beetle Green Peach Aphid Tobacco Aphid	1 lb	<p>Apply to foliage at the equivalent of 1 tablespoon in 3 gals. water per every 1,000 sq ft. of bed. Apply evenly to insure thorough coverage.</p> <p>NOTE: Floated water should be disposed of in the transplanted field through the transplant water or through foliar spray.</p>

TOBACCO SOIL APPLICATION (EXCEPT CA)

Crop	Insects	Amount ORTHENE 75 S	Further Use Instructions	Days to Harvest
Tobacco	Imported Fire Ants	Mound Treatment - Dry Method: Evenly distribute 1 to 2 teaspoons over the mound. Wet Method: Mix 1 oz. in 3 gals. of water. Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	<p>For best results apply the material in the early morning or late afternoon when the ants are most active.</p> <p>Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.</p> <p>Treat maximum of 13 mounds per acre.</p> <p>Do not treat more than once per season.</p>	3

FRUIT CROPS

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Cranberries	Cranberry Blossom Worm Gypsy Moth Fall Armyworm Fireworms Spaworms Sparpanoths	1-1/3 lbs	<p>Apply in water by air, ground or with sprinklers.</p> <p>Use a minimum of 2 gals. spray per acre by air. Use sufficient water to give thorough coverage with ground or sprinkler equipment.</p> <p>Note: Limit to one application per growing season.</p> <p>Do not apply from start of bloom until all berries set.</p>	30

SPRINKLER IRRIGATION APPLICATION TO CRANBERRIES:

This product may only be applied through sprinkler irrigation systems including center pivot, lateral move, end tow side wheel rail, travelers, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place. A person knowledgeable of the chemical system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Solid Set Systems: Apply specified dosage for the entire length of the irrigation period or for a 30 to 60 minute period at the end of a regular irrigation set or as a 30 to 60 minute injection as a separate application not associated with a regular irrigation. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water to ensure the lines are flushed and free of remaining pesticide. A dye indicator may be injected into the lines to mark the end of the application period. See NOTE.

Center Pivot Systems: Inject the specified dosage per acre continuously for one complete revolution of the system. See NOTE.

NOTE: Constant agitation must be maintained in the chemical supply tank during the entire period of insecticide application. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.

Application of more than label recommended quantity of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness.

5047

VEGETABLE CROPS

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Beans and Lima Beans (Dry and Succulent forms)	Fleahoppers Grasshoppers	1.3 to 2.3 lb	Apply in water at a minimum of 2 gals spray per acre by air or 20 to 100 gals spray per acre by ground. Apply when eggs or insects first appear. Repeat at 7 to 10 day intervals as necessary. Severe insect infestations use higher rates. Do not feed treated vines to livestock. 0 lima beans succulent form.	14 (14 days for dry beans)
	Aphids Bean leaf beetle Bean leafhopper Cabbage looper Cutworms Green Cloverworm Leafhoppers Mexican bean beetle Plantbugs (Lygus) Soybean looper Thrips Whitefly	2.3 to 1.3 lbs		
Brussels Sprouts Cauliflower	Green peach aphid	2.3 to 1.3 lbs	Apply in water at 25 to 150 gals spray per acre by ground or a minimum of 5 gals spray per acre by air. Use the high rate when heavy infestations of aphids are present. Begin applications when insects or eggs first appear. Repeat application as needed. Do not apply more than 8 lbs per acre per season to Brussels Sprouts. Do not feed trimmings to livestock or allow animals to graze in treated areas.	14
	Cabbage looper Diamondback moth Imported cabbage worm	1-1.3 lbs		
Celery	Green peach aphid	2.3 to 1.3 lbs	Apply in water at 50 to 100 gals spray per acre by ground or a minimum of 5 gals spray per acre by air. Apply when eggs or insects appear and repeat at 3 to 10 day intervals as necessary to maintain control. Trim plants (tops removed) before shipment or use. Do not use trimming (tops) for food or feed.	21
	Beet and Fall armyworms Cabbage looper	1.3 lbs		
Head Lettuce (Crishead Type Only)	Aster Leafhopper Green peach aphid	2.3 to 1.3 lbs	Apply in water at 5 to 10 gals spray per acre by air or 10 to 60 gals spray per acre (broadcast) by ground. Apply as necessary to maintain desired control. Do not apply more than 6.2 lbs per acre per season. Do not apply after first head begins to form to crops which germinate from mid September through November in desert areas of AZ and CA. Do not feed trimmings to livestock or allow animals to graze on treated areas.	21 (Spring summer and early fall crops in all areas and winter crops in Florida and Texas; late fall crops in Arizona; winter crops in Arizona and California)
	Cabbage looper Armyworms	1.3 lbs		
Peppers (non bell type)	Aphids	2.3 lb	For use in Midwestern, Eastern States and Puerto Rico only. Apply in water at 40 to 150 gals spray per acre with ground equipment. Repeat at 7 to 10 day intervals as necessary. Do not exceed 7 applications per season.	7
Sweet peppers (Bell type)	Grasshoppers	1.3 to 2.3 lb	Apply in water at a minimum of 3 gals spray per acre by air or 25 to 150 gals spray per acre by ground. Apply when eggs or insects appear. Repeat as necessary until insects have been reduced below economic numbers.	7
	Cabbage looper Green peach aphid	2.3 to 1.3 lbs		
	Tobacco hornworm European corn borer	1 to 1.3 lbs		

PASTURE, RANGELAND, WASTELAND

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Pasture Rangeland, Wasteland	Grasshoppers Mormon Crickets Black Grass Bugs	1.8 to 1.6 lb (0.094 to 0.125 lb active ingredient)	Apply in water at a minimum of 1/2 gal spray per acre by air or 10 to 20 gals spray per acre by ground. Use the higher rate in thicker vegetation or on larger insects. An approved drift retardant additive may be added to aid in controlling drift and reducing evaporation of aerial sprays. Do not make more than one application per season. Do not apply when lactating dairy cattle are present. Do not graze or feed grass or grass hay to dairy animals. Remove meat animals from treated areas at least one day before slaughter if they were present at application or grazed treated areas within 21 days after application.	21 for hay

Continued

(Continued)

PASTURE, RANGELAND, WASTELAND

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Pasture Rangeland Wasteland	Imported Fire Ants	Mound Treatment — Dry Method Evenly distribute 1 to 2 teaspoons over the mound. Drench Method Mix 1 oz in 5 gals of water. Apply 1 gal of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	For best results apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest. Grass in treated area may be injured. Treat maximum of 13 mounds per acre. Do not treat mound more than once per season. Do not apply when lactating dairy cattle are present. Do not graze or feed grass or grass hay to dairy animals. Remove meat animals from treated areas at least one day before slaughter if they were present at application or grazed treated areas within 21 days after application.	

SPECIALTY USES

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions
Non-Crop Areas (field borders, fence rows, roadsides, ditchbanks and borrow pits)	Grasshoppers	1.5 lb (125 lb active ingredient)	For early to mid season application to grasshoppers in field borders, fence rows, roadsides, ditchbanks and borrow pits. Apply in 1 to 5 gals of water by air or in 10 to 20 gals of water with ground equipment. Use the higher volumes when spraying heavier foliage. Do not graze or feed vegetation cut from treated areas.

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions
Non-Crop Areas	Imported Fire Ants	Mound Treatment — Dry Method Evenly distribute 1 to 2 teaspoons over the mound. Drench Method Mix 1 oz in 5 gals of water. Apply 1 gal of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	For best results apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest. Grass in treated area may be injured. Do not treat mound more than once per season.

Plants	Insects	Amount ORTHENE 75 S Per 100 Gals	Time of Application	Recommended Application
Container Grown Nursery Stock (Arbutus, Azalea, Camelia, Rhododendron, Roses, Viburnum, Yew)	Black Vine Weevil Strawberry Root Weevil	1 lb (16 oz)	Application should be made by mid September for green house stock and by mid October for outdoor stock. Consult your local county extension agent for information on the identification and control of root weevils on ornamentals.	Apply the specified amount of ORTHENE 75 S Soluble Powder per 100 gals of solution so as to thoroughly drench the root system.
	Imported Fire Ants	1 lb (16 oz)	Apply as needed to control the pest.	

SMALL SPRAY EQUIPMENT

Preparation of ORTHENE Spray Mix using a 16 oz. Measuring Cup		
Label Recommendation ORTHENE in 100 Gals Water	Equivalent ORTHENE in 20 Gals Water*	Equivalent ORTHENE in 1 Gal Water (1sp. Gal)
1.3 lb	2.12 oz	1
2.3 lb	5 oz	2
1 lb	7.12 oz	3
1.3 lbs	10 oz	4

*Use 16 oz. measuring cup

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TREES AND SHRUBS

Plants	Insects	Amount ORTHENE 75 S Per 100 Gals	Time of Application	Recommended Application
Trees and Shrubs (Except Flowering Crabapple see below)	Aphids, Bagworms, Birch Leafminer, Caterpillar, Lace Bugs, Leafhoppers	1.3 lb (5.3 oz)	As the insects begin to appear	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals water with a hydraulic sprayer. The addition of a suitable sticker improves control of Gypsy Moth larvae.
	Locusts, Leafhoppers, Moth Larvae, Gypsy Moth Larvae, Webworms	2.3 lb (10.5 oz)	As the insects begin to appear	*Airst blower application. Adjust rates to 1.1-3 lbs per 100 gals water for Gypsy Moth control and 1.0 lb per 100 gals water for leaf Caterpillar control.
	Scales (Crawlers)	2.3 lb (10.5 oz)	As crawlers begin to appear. Repeat applications at a 2 week or more interval may be necessary where there is continuous crawler production.	Do not apply to Nucleberry, Bam of Greed, Cottonwood, Lombardy Poplar and Viburnum suspensum. Nursery crops. Before treating large plantings, spray only a few plants and observe two weeks for phytotoxicity.
Trees and Shrubs	Ponderosa Pine Needle Miner	2.3 lb (10.5 oz)	Time of application is important. Consult your Farm Advisor or County Extension Agent.	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals water with a hydraulic sprayer as a full coverage spray.
	Grasshoppers	2.3 lb (10.5 oz)	As the grasshoppers begin to appear	
	California Oakworm, Cankerworms (Spring and Fall)	1.3 to 2.3 lb (5.3 to 10.5 oz)	As the insects begin to appear. Use the higher amount when the larger larvae are present.	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals water with a hydraulic sprayer.
	Nantucket Pine Tip Moth Larvae	1 lb (16 oz)	Time of application is important. Consult your Farm Advisor or County Extension Agent. Repeat applications will be required for subsequent generations.	
	Root Weevil Adults	1 lb (16 oz)	Apply when first feeding damage occurs. Repeat applications at four week intervals until the first heavy frost. May be necessary for complete foliage protection.	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals water with a hydraulic sprayer as a full coverage spray.
	Box Elder Bugs, Sawflies, Budworms, Leafhoppers	1 lb (16 oz)	As the insects begin to appear	
	Japanese Beetle	1.1-3 lbs (12.1-3 oz)	As the Japanese Beetles begin to appear. Repeat applications at 2 week intervals, may be necessary.	
Elm Leaf Beetle (larvae)	1.1 lb (12.1 oz)	As the larvae begin to appear. ORTHENE will not prevent Elm Leaf Beetle eggs from hatching.		
Douglas Fir (Christmas Trees)	Douglas Fir Needle Midge	4.5 lb (10.5 oz)	Application should be made no more than 2 weeks prior to bud burst. For additional pest management information consult your County Extension Service.	Apply the specified amount of ORTHENE 75 S Soluble Powder in not less than 2 gals of spray per acre by air or in 100 gals of spray per acre by ground.
Flowering Crabapples	Aphids, Tent Caterpillars, Leafrollers	1.5 lb (5.3 oz)	As the insects begin to appear	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals water with a hydraulic sprayer. Do not apply more often than 3 times in a growing season at a 4 week interval. Caution: Phytotoxicity has occurred on the following Crabapple varieties: Hops, Ichonosa, Nipaliflorunda, Pink Perfection, Red Wine and Snow Cloud.
Crape Myrtle	Aphids	3 to 4 level lbs (10.8-11 oz) per 1 lbs. of water	As aphids begin to appear	Make a paste or slurry by mixing the specified amount of ORTHENE 75 S Soluble Powder with 1 gallon of water. Remove the loose bark from the trunk areas to be treated. Completely paint a band around each trunk to a width twice its diameter. Application should be made in trunks within a zone 6 to 12 inches above the ground and below the point where branching begins. For multi-trunk plants be certain to treat all trunks. For other single or multi trunk plants application should be made as low as possible within the recommended treatment zone.



COMMERCIAL TURFGRASS LAWNS AND OTHER RECREATIONAL TURFGRASS AREAS
DO NOT ALLOW LIVESTOCK TO GRAZE TREATED AREAS. DO NOT FEED TREATED GRASS TO LIVESTOCK

Plant	Insects	Amount ORTHENE 75 S Per 1000 Sq Ft	Time of Application	Recommended Application
Turfgrass (Residential & Commercial)	Fall Armyworm, Yellow Striped Armyworm, Southern Armyworm	1/2 to 1.2 oz (1 1/2 to 3 1/2 lbs per acre)	As the insects appear. A repeat application at 2 week intervals may be necessary.	Apply the specified amount of ORTHENE 75 S Soluble Powder per 1000 sq ft. Use a minimum of 5 gals water per 1000 sq ft. to obtain good coverage.
	Cutworm	1/2 to 2.4 oz (1 1/2 to 6 1/2 lbs per acre)		
	Crunch Bugs	1.2 to 2.4 oz (3 to 6 1/2 lbs per acre)	Apply as needed to adult population knockdown (10 to 14 days)	Apply the specified amount of ORTHENE 75 S Soluble Powder per 1000 sq ft. Use 1 to 15 gals water per 1000 sq ft. to obtain good coverage.
	Fleas	1.2 to 2.4 oz	Apply as needed for knockdown (7 to 10 days) only of existing adult populations.	
	Sod Webworm (Crawlers egg)	1/2 to 1 oz (1 1/2 to 2 1/2 lbs per acre)	As sod webworms begin to appear. Use the higher amount when quick knockdown is needed or with heavy infestations. Repeat application may be necessary. Do not repeat at more than 1 week intervals.	
	Leafhopper	1 oz (12 1/2 lbs per acre)	As the leafhoppers begin to appear. A repeat application at 1 week intervals may be necessary.	
Turfgrass	Mole Crickets (Except CA)	1.0 to 1.9 oz (2.66-5.2 lbs per acre)	As mole crickets begin to appear. For knockdown of existing populations, more than one application may be required throughout the growing season. For heavy infestations, use the higher dosage rate.	Apply the specified amount of ORTHENE 75 S Soluble Powder per 1000 sq ft. Use 1 to 15 gals water per 1000 sq ft. to obtain good coverage. Apply during late afternoon or early evening hours and after an irrigation. Do not irrigate after application. The use of a lemon fragrance substance in the spray may enhance control by acting as a flushing agent and thus provide increased mole cricket contact with the ORTHENE 75 S Soluble Powder. The following lemon-scented products have been shown to be effective flushing agents: Lemon Joy, Lemon Palmolive, and Mighty Myrt Products Manufacture. Base Pure Lemon Fragrance. The use rate for these lemon-scented products is 2 teaspoons per gallon of water for small total mix volumes or 6 R. oz per 50 gals of water for large total mix volumes.
	Greenbug (Schizaphis graminum) Grasshoppers	1/2 oz (1 1/2 lbs per acre)	Apply when insects or their damage first appears. Repeat as necessary. Application is not to be repeated at more than 1 week intervals.	Apply the specified amount of ORTHENE 75 S Soluble Powder. Use 4 gals of water per 1000 sq ft. to obtain good coverage. Do not mow turfgrass for at least 24 hours after application.
	Dichondra	Cutworm, Flea Beetle, Southern Armyworm, Yellow Striped Armyworm	1.0 to 1.9 oz (2.7 to 5.2 lbs per acre)	As the insects appear. Repeat at 2 week intervals as necessary.

Plant	Insects	Amount ORTHENE 75 S	Time of Application	Recommended Application
Turfgrass	Imported Fire Ants	Mound Treatment—Dry Method: Evenly distribute 1 to 2 teaspoons over the mound. Drench Method: Mix 1 oz in 5 gals of water. Apply 1 gal of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	For best results apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.	Apply the specified amount of ORTHENE 75 S Soluble Powder as directed. Grass in treated areas may be mowed. Do not treat mound more than once per season.

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OUTDOOR WASP AND PERIMETER SPRAY

Location	Insects	Amount ORTHENE 75 S Per Gallon	Time of Application	Recommended Application
Outdoor Wasp and perimeter area	Wasps	16 oz (10 lbs)	Treat early or late in the day as wasps are generally less active during these times	Apply specified amount of ORTHENE 75 S Soluble Powder per each gallon of water used. Apply as a spot treatment to the nest, nest entrance and surrounding areas where the wasps build.
	Cockroaches Ants Flies Earwigs Perimeter Treatment	16 oz (10 lbs)	As the insects appear	Apply specified amount of ORTHENE 75 S Soluble Powder per each gallon of water used. Apply to a band of soil 6 to 10 feet adjacent to the structure and to a height of 2 to 3 feet on the foundation where pests may be active or may find entrance. Also apply as a residual spray or with a paint brush to surfaces of buildings, window frames, shutters, entryways, screens, eaves, porches, garages, porches, around garbage areas and other areas where these pests congregate.

OUTDOOR FLORAL CROPS AND GROUND COVERS

Plants	Insects	Amount ORTHENE 75 S Per 100 Galts	Time of Application	Recommended Application
Daisies Dahlias Easter Lily Gladiol Gypsophila Pachy-sandra Pansy Roses Sedum Statice Straw Newer Yarrow Zinnia	Aphids Thrips Lygus	2.3 lb (10.5 oz)	As insects begin to appear. Repeat applications may be necessary	Apply the specified amount of ORTHENE 75 S in 100 galts water with a hydraulic sprayer as a full coverage spray. Multiple applications may cause slight tip burn or marginal leaf necrosis on some varieties. Test on a few plants to determine varietal susceptibility.
Roses Boston Ivy	Japanese Beetle	1.1-3 lbs (21.3 oz)	As the Japanese Beetles begin to appear. Repeat applications at 2 week intervals may be necessary	

GREENHOUSE FLORAL AND FOLIAGE PLANT CROPS

Plant	Insects	Amount ORTHENE 75 S Per 100 Galts	Time of Application	Recommended Application
Roses	Leafrollers	4.1 lb (18.5 to 16 oz)	As leafrollers begin to appear. Use the higher amount when the large larvae are present	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 galts water with a hydraulic sprayer as a full coverage spray.
Foliage Plants Orchids Anemiums Cacti Poinsettia	Aphids Mealybugs Thrips Whiteflies	4.1 lb (18.5 oz)	As insects begin to appear. A repeat application at a 2 week interval may be necessary for control of mealybugs and whiteflies.	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 galts water with a hydraulic sprayer as a full coverage spray. The addition of a wetting agent may be required on difficult to wet foliage. Caution: Phytotoxicity has occurred on the following foliage plants: <i>Betula pumila</i> , <i>Cissus sibirica</i> , <i>Ficus mangle</i> , <i>Fritoma verschaffelii</i> , <i>Marrubium leucocaulis</i> , <i>Sarcocolla</i> , <i>Pachystachya lutea</i> , <i>Plectranthus australis</i> , <i>Polypodium aureum</i> , <i>Polystichum Pteris ensiformis</i> , <i>Tomia menziesii</i> . Before treating large plantings spray only a few plants and observe 2 weeks for varietal phytotoxicity. Application of ORTHENE 75 S Soluble Powder on Poinsettias after bract formation may result in phytotoxicity on certain varieties.
Sweet Potato Whiteflies (except CA and NY)	Crawlers	4.1 lb (18.5 oz) plus TAME 2.4 EC Spray 10% (10.2 lb a.i.)	Apply when insects first appear. If a population is well established make one application of the tank mix and follow 5 to 7 days later with TAME alone at 16.1 lb (100 galts). See TAME label for instructions.	For sweet potato whitefly control apply the specified amounts of ORTHENE 75 S Soluble Powder plus TAME 2.4 EC Spray as a tank mix at a volume necessary to obtain good coverage. Follow the TAME label for specific instructions on the information of TAME plus ORTHENE and TAME alone and the rotation instructions to avoid potential resistance.
Roses Carnations Chrysanthemums	Aphids Thrips	4.1 lb (18.5 oz)	As aphids begin to appear. As thrips begin to appear or at the tight flower bud stage. Repeat applications may be necessary.	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 galts water with a hydraulic sprayer as a full coverage spray. Do not apply more often than once every 28 days to Carnations and Chrysanthemums. Caution: Phytotoxicity has occurred on the following Chrysanthemum varieties: Albatross, Bonne Jean, Dore, Garland, Gem Iceberg, Prue Showoff, Statesman, Tally Ho, Westward Ho, and Wild Honey. Before treating large Chrysanthemum plantings spray only a few plants and observe two weeks for varietal phytotoxicity. Do not apply to Chrysanthemums and Roses with open flowers.

STORAGE AND DISPOSAL

PROHIBITIONS
Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. Open dumping is prohibited.

STORAGE
Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Store in cool, dry place. Protect from excessive heat. Do not contaminate food or foodstuffs. Do not store or transport near feed or food.
For help with any spill, leak, fire or exposure involving this material, call day or night: 1-800-852-0095 or Chemtrec 1-800-424-9300.

PESTICIDE DISPOSAL
Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL
Completely empty container into application equipment. Do not reuse container. Dispose of empty container in a secondary landfill or by incineration or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

IMPORTANT INFORMATION, READ BEFORE USING PRODUCT

LIMITED WARRANTY: Valent U.S.A. Corporation warrants that this product conforms to the chemical description on the label and is reasonably fit for use under average conditions when used strictly in accordance with the directions on the labeling. Valent does not make nor authorize any agent or representative to make any other warranty, guarantee or representation, express or implied, concerning this product. Specifically, NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE IS MADE.

2. Critical and unforeseeable factors beyond Valent's control prevent it from eliminating all risks in connection with the use of this product. Such risks include, but are not limited to, damage to plants and crops to which product is applied, lack of complete control over the handling and application of this product, and damage caused by drift to other plants or crops. Such risks occur even though the product is reasonably fit under average conditions for the uses stated on the labeling and even though label directions are followed. Buyer and user acknowledge and assume all risks and liability (except those assumed by Valent under 1 above) resulting from handling, storage and use of the product.

3. Precautions stated on the labeling should be followed to avoid hazardous exposure to the product.

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LORSBAND® - Reg. TM of Dow Chemical Company for chlorpyrifos insecticide.
PYDRIN® - Reg. TM of E.I. du Pont de Nemours & Co., Inc. for fenvalerate insecticide.
ORTHENE® - Reg. TM of Chevron Chemical Company for acephate insecticide.

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Do not apply under conditions involving possible drift to food, storage or other plantings that might be damaged or the crop thereof rendered unfit for sale use or consumption.

NOTE: This product is sold by weight and package is full when packed but due to fluffy nature this material is retained to some.