

TOBACCO (except CA)
TRANSPLANT WATER APPLICATION

CROP	PEST	755 LBS. ORTHENE TOBACCO INSECT-SPRAY PER ACRE
Tobacco	Fla. Beetle, Green Peach Aphid, Tobacco Aphid, Cutworm	1

Provides control of early season flea beetles, green peach aphids, tobacco aphids and cutworms for approximately 3-4 weeks after transplanting. For later season control of these insects, apply a foliar spray of ORTHENE Tobacco-Insect-Spray.

Apply in a minimum of 100 gallons of transplant water per acre. **755 SOLUBLE POWDER**
 DO NOT APPLY MORE THAN 1 LB. ORTHENE TOBACCO-INSECT-SPRAY PER ACRE AS A TRANS-
 PLANT WATER APPLICATION AS SOME PHYTOTOXICITY MAY OCCUR.

FOLIAR APPLICATION

CROP	PEST	755 LBS. ORTHENE TOBACCO INSECT-SPRAY PER ACRE
Tobacco	Grasshoppers	1/2 to 1
(Fire-Cured)	Green Peach Aphid, Fla. Beetle,	2
Air-Cured	hornworm	1/2 to 1
Dark Fire-Cured	Tobacco Aphid	1
	Budworm, Cabbage Looper, Cutworm	

Apply in 10 to 50 gals. water per acre with ground equipment or a minimum of 3 gals. per acre by air. Apply on a 7 day schedule or as needed. Do not apply within 3 days of harvest. Do not re-enter sprayed areas until the spray deposit has dried.

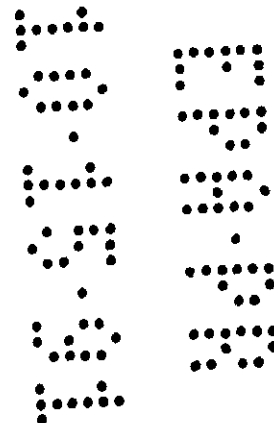
PLANT BED APPLICATION

CROP	PEST	755 LBS. ORTHENE TOBACCO INSECT-SPRAY PER ACRE
Tobacco Bed Treatment	Fla. Beetle, Green Peach Aphid, Tobacco Aphid, Cutworm	1

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.

CROP	PEST	SOIL APPLICATION AMOUNT ORTHENE TOBACCO-INSECT-SPRAY @ 755 SOLUBLE POWDER
Tobacco	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. Treat maximum of 13 mounds per acre. Do not treat more than once per season. Do not apply within 3 days of harvest.





ORTHENE®

Soluble Powder

(SECTICIDE)

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

Ingredients: Orthene 75 S Soluble Powder
By Wt. 75%
Orthene 75 S Soluble Powder
By Wt. 25%

Manufactured by
Valent U.S.A. Corporation © 1991
Walnut Creek CA 94596-8025
R Form 254-H Made in U.S.A.
EPA Reg. No. 59639-26-AA

ORTHENE KILLS FIRE ANTS

PRECAUTIONARY STATEMENTS

TO HUMANS & DOMESTIC ANIMALS

TOXICITY

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

FIRST AID/TREATMENT

Swallowing: Drink 1 or 2 glasses of water (or milk) and induce vomiting by touching the back of the throat with 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 nearest emergency treatment center. In case of eye contact, wash eyes with fresh water for 15 minutes. If contact continues, see a doctor. For skin contact, wash skin with plenty of soap and water. If inhaled, remove person from exposure area.

Physicians: Emergency Information—call 800-457-2022. 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 only if used alone.

SAFETY

WHEN WEARING THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT DURING MIXING/LOADING, APPLICATION, REPAIR, AND CLEANING OF MIXING, LOADING, AND APPLICATION EQUIPMENT, AND DISPOSAL OF PESTICIDE, AND (areas for which a reentry interval has been established) EARLY REENTRY INTO TREATED AREAS: chemical-resistant gloves, long sleeved shirt, long legged pants, shoes and socks. If overhead exposure such as during flagging, wear a hood or wide brimmed hat. **WORK SAFETY:** Always wash hands, face and clothes with soap and water before smoking, eating, drinking or toileting. **AFTER WORK:** Before removing gloves, wash with soap and water. Take off all work clothes and shoes. Shower using soap and water. Wear only clothes when leaving job. Do not wear contaminated clothing. Personal and protective clothing worn during application must be laundered separately from household articles. Store protective clothing separately from personal clothing. Clean or launder protective clothing after each use.

ENVIRONMENTAL HAZARDS

Orthene is toxic to birds. Applications may adversely affect birds in rangeland treatment areas. Do not apply to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not allow soil-incorporate spills. Orthene is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply to product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

USE INSTRUCTIONS

Application of Federal Law to use this product in a manner inconsistent with its labeling.

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

REENTRY STATEMENT

Unprotected persons out of operating areas or vicinity where there may be drift from agricultural crops, commercially grown ornamentals, commercial sod farms, and in greenhouses, reentry into treated areas is prohibited for 24 hours after the end of application unless the protective clothing specified on this label is worn. For other uses, including golf courses and other non-agricultural areas, do not enter treated areas without protective clothing until sprays have dried. States may require more restrictive reentry intervals, consult your State Department of Agriculture for information.

For oral warnings regarding use of protective clothing and accidental exposure must be given to workers expected to be in treated areas or in areas about to be treated.

APPLICATIONS

Orthene is applied only by sprinkler irrigation systems. Do not apply by chemigation to any other crop, or this or any other type of irrigation system.

Table of Equivalents

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

COTTON

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Cotton	Thrips	2 oz. to 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.	21
	Plantbugs (Lygus)	1/2 to 1 1/2 lbs. (CA, AZ)		
	Flea hopper	1/2 lb.		
	Cotton Aphid	1/2 to 1 1/2 lbs.	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Whitefly	1/2 to 1 1/2 lbs.		
	Armyworms	1 1/2 lbs.	Do not feed gin trash to livestock or allow animals to graze on treated areas.	
	Cabbage looper	1 1/2 lbs.		
	Bollworm	1/2 to 1 1/2 lbs.		
	Tobacco Budworm	1/2 to 1 1/2 lbs. (East of Rockies)		
	Adults	1 1/2 lbs. (CA, AZ)	Lygus—Use higher rate for Lygus adults that have migrated into cotton.	
Cotton	Eggs/DEADHATCH™	1 lb.	Bollworm and Tobacco Budworm—Early season light infestation use 1/2 lb. 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 interval.	
	Stinkbugs (CA, AZ)	1 lb.		
	Pink Bollworm (CA, AZ)	1 1/2 lbs.		
			Adults/Larvae: Moths are controlled when they come in direct contact with spray particles during application.	

FRUIT CROPS

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Cranberries	Cranberry Blossom Worm Gypsy Moth False Armyworm Fireworms Spanworms Sparganopsis	1-1/3 lbs.	Apply in water by air, ground or with sprinklers. Use a minimum of 2 gals. spray per acre by air. Use sufficient water to give thorough coverage with ground or sprinkler equipment. Note: Limit to one application per growing season. Do not apply from start of bloom until all berries set.	90

SPRINKLER IRRIGATION APPLICATION TO CRANBERRIES:

This product may only be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, 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 chemigation 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 quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness.

VEGETABLE CROPS

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Beans and Lima Beans (Dry and Succulent Forms)	Flea hoppers	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.	14 (snapbeans or dry beans)
	Grasshoppers	2/3 to 1-1/3 lbs.		0 (lima beans - succulent form)
	Aphids		Apply when eggs or insects first appear. Repeat at 7 to 10 day intervals as necessary. Severe insect infestations, use higher rates.	
	Bean leaf beetle			
Brussels Sprouts Cauliflower	Bean leaf beetle			14
	Cabbage looper			
	Cutworms			
	Green Cloverworm			
	Leafhoppers			
	Mexican bean beetle			
	Plantbugs (Lygus)			
	Soybean looper			
	Thrips			
	Whitefly			
Brussels Sprouts Cauliflower	Armyworms	1 to 1-1/3 lbs.		
	Corn earworm			
Brussels Sprouts Cauliflower	European corn borer			
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 gals. spray per acre by air.	14
	Cabbage looper	1-1/3 lbs.	Use the high rate when heavy infestations of aphids are present.	
Brussels Sprouts Cauliflower	Diamondback moth			
	Imported cabbage worm			
Brussels Sprouts Cauliflower			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.	
Brussels Sprouts Cauliflower			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	1-1/3 lbs.	Apply when eggs or insects appear and repeat at 3 to 10 day intervals as necessary to maintain control.	
Celery	Cabbage looper			
Celery			Trim plants (tops removed) before shipment or use.	
			Do not use trimming (tops) for food or feed.	
Head lettuce (Crisphead Type Only)	Aster Leafhopper	2/3 to 1-1/3 lbs.	Apply in water at 5 to 10 gals. spray per acre by air or 10 to 80 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
	Green peach aphid			
Head lettuce (Crisphead Type Only)	Cabbage looper	1-1/3 lbs.	Apply as necessary to maintain desired control. Do not apply more than 8-2/3 lbs. per acre per season.	
	Armyworms			
Head lettuce (Crisphead Type Only)			Do not apply after first head	

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 800-457-2022.

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 canister into application equipment. Do not reuse container. Dispose of empty canister in a sanitary 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 authorizes 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.

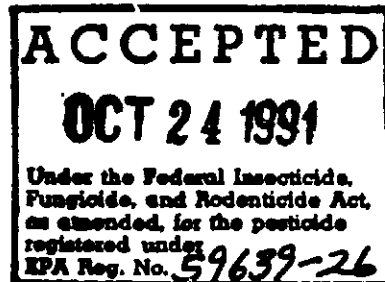
2. Critical and unforeseeable factors beyond Valent's control prevent it from eliminating all risks in connection with the use of this product. Such risks include, but are not limited to, damage to plants and crops to which product is applied, lack of complete control over the handling and application 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.

LDORBAN®—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.



TREES AND SHRUBS

	Insects	Amount ORTHENE 75 S Per 100 Gals.	Time of Application	Recommended Application
s d	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 generation.	
	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. (21.3 oz.)	As the Japanese Beetles begin to appear. Repeat applications, at 2 week intervals, may be necessary.	
	Elm Leaf Beetle (larvae)	1-1/2 lb. (21.3 oz.)	As the larvae begin to appear. ORTHENE will not prevent Elm Leaf Beetle eggs from hatching.	
s fir mas	Douglas Fir Needle Midge	1/2 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.
ng opies	Aphids Tent Caterpillars Leafrollers	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 often than 3 times in a growing season at a 4 week interval. Caution: Phytotoxicity has occurred on the following Crab-apple varieties: Hoga, Jhonoski, Malus floribunda, Pink Perfection, Red Wine and Snow Cloud.

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

	Insects	Amount ORTHENE 75 S Per 1000 Sq. Ft.	Time of Application	Recommended Application
ss tenal nmer-	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 1,000 sq. ft. Use a minimum of 5 gals. water per 1,000 sq. ft. to obtain good coverage.
	Cutworm	1.2 to 2.4 oz. (3 1/4 to 6 1/2 lbs. per acre)		
	Chinch Bugs	1.2 to 2.4 oz. (3 1/4 to 6 1/2 lbs. per acre)	Apply as needed for adult population knock-down (10 to 14 days).	Apply the specified amount of ORTHENE 75 S Soluble Powder per 1,000 sq. ft. Use 1 to 15 gals. water per 1,000 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 (Crambe spp.)	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 knock-down is needed or with heavy infestations. Repeat application may be necessary. Do not repeat at more than 1 week intervals.	Apply the specified amount of ORTHENE 75 S Soluble Powder per 1,000 sq. ft. Use 1 to 15 gals. water per 1,000 sq. ft. to obtain good coverage. Apply during late afternoon or early evening hours and after an irrigation. Do not irrigate after application.
	Leafhopper	1 oz. (2 1/2 lbs. per acre)	As the leafhoppers begin to appear. A repeat application at 1 week intervals may be necessary.	
	Mole Crickets (Except CA)	1.0 to 1.8 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 1,000 sq. ft. Use 1 to 15 gals. water per 1,000 sq. ft. to obtain good coverage.
	Grasshopper (Schistocerca gregaria)	1/2 oz. (1 1/2 lbs. per acre)	Apply when insects or their damage first appears. Repeat as necessary during.	

Do not apply ORTHENE 75 S to crops which germinate from mid-September through November in desert areas of AZ and CA.

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

Crops	Insects	Amount ORTHENE 75 S + LORSBAN® 4E Per Acre	Further Use Instructions	Days to Harvest
Cotton (CA, AZ)	Armyworms Bollworm Cabbage Looper Cotton Aphid Cutworms Flies Grasshoppers Pink Bollworm Plant Bugs (Lygus, Mirids) Soybean 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

Crops	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 Black (Greasy) Cutworm	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 with 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.

COTTON IN-FURROW APPLICATION

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions												
Cotton	Aphids Thrips	0.5 to 10 lb. active	<p>Refer to the ORTHENE 75 S conversion chart before making product application</p> <p>ORTHENE 75 S CONVERSION CHART</p> <p><u>LBS. A.I. TO OZ. FORMULATED PRODUCT</u></p> <table><tbody><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></tbody></table> <p>Apply 0.5 to 10 lb. active ORTHENE 75 S in 3 to 5 gals. of water per acre as an in-furrow spray.</p> <p>NOTE: For the Blacklands 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>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. 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														
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1.0	21.3														

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Do not apply ORTHENE 75 S 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 Cabbage looper Green peach aphid Tobacco hornworm European corn borer	1/3 to 2/3 lb. 2/3 to 1-1/3 lbs. 1 to 1-1/3 lbs.	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

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 1/5 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 pasture or feed treated hay to lactating dairy cattle within 21 days after application. 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 h
	Imported Fire Ants	Mound Treatment—Dry Method: Evenly distribute 1 to 2 teaspoons over the mound. Branch 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 pasture or feed hay to lactating dairy cattle within 21 days after application. Remove meat animals from treated areas at least 1 day before slaughter if they were present at application or grazed treated areas within 21 days after application.	21

SPECIALTY USES

Crops	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 (1.25 lb. active ingredient)	For early to mid-season application grasshoppers in field borders, fence roadsides, ditchbanks, and borrow pits. Apply in 1 to 5 gals. of water by air or 10 to 20 gals. of water with ground equipment. Use the higher volumes spraying heavier foliage. Do not graze vegetation cut from treated areas.

Crops	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. Branch 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 (Arboreal and Azalea)	Black Vine Weevil Strawberry Root Weevil	1 lb (10 oz.)	Application should be made by mid-September for greenhouse stock and by mid-October for outdoor stock. Consult your local county	Apply the specified amount of ORTHENE 75 S Soluble Powder 100 gals. of solution so as to thoroughly drench the root system.

	grasshoppers		appear. Repeat as necessary. Application is not to be repeated at more than 1 week intervals.	Use 4 gals. of water per 1,000 sq. ft. to obtain good coverage. Do not mow turfgrass for at least 24 hours after application.
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Plants	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 injured. Do not treat mound more than once per season.

Plants	Insects	Amount ORTHENE 75 S Per 1,000 Sq. Ft.	Time of Application	Recommended 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.	Apply the specified amount of ORTHENE 75 S per 1,000 sq. ft. Use a minimum of 15 gals. of water per 1,000 sq. ft. to obtain good coverage.

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. (0.10 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 alight.
	Cockroaches Ants Pillbugs Earwigs (Perimeter Treatment)	16 oz. (0.10 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, patios, garages, carports, around garbage areas and other areas where these pests congregate.

OUTDOOR FLORAL CROPS AND GROUND COVERS

Plants	Insects	Amount ORTHENE 75 S Per 100 Gals.	Time of Application	Recommended Application
Daisies Dahlias Easter Lily Gladioli Gypsophila Pachysandra Peony Roses Sedum Statice Strawflower 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 gals. 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

Plants	Insects	Amount ORTHENE 75 S Per 100 Gals.	Time of Application	Recommended Application
Roses	Leafrollers	1/2 to 1 lb. (10.5 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 gals. water with a hydraulic sprayer as a full coverage spray.
Foliage Plants Orchids Anthurums Cacti Poinsettia	Aphids	1/2 lb. (5.3 oz.)	As aphids begin to appear.	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals. water with a hydraulic sprayer as a full coverage spray. The addition of a wetting agent may be required on difficult to wet foliage.
	Mealybugs Thrips Whiteflies	1/2 lb. (10.5 oz.)	As the insects begin to appear. A repeat application, at a 2 week interval, may be necessary for control of mealybugs and whiteflies.	
	Scales (Crawlers)	1/2 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.	Caution: Phytotoxicity has occurred on the following foliage plants: Bletchum gibbum, Cissus antarctica, Ficus triangularis, Fittonia verschaffeltii, Maranta leuconeura kerchoviana, Pachystachys lutea, Plectranthus australis, Polypodium aureum, Polystichum, Pteris anisiformis, Tolmiea menziesii. 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)	1/2 lb. (5.3 oz.) plus IAAE 2.4 EC Spray 10% fl. oz. if 2 m. or	Apply when insects first appear. If a population is well established, make one	

powder and mix thoroughly with a stick. Pour 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, premix 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.

COTTON IN-FURROW APPLICATION

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

Additional uses are shown on the back of the container.

around the mound.

or feed hay to lactating dairy cattle within 21 days after application. Remove meat animals from treated areas at least 1 day before slaughter if they were present at application or grazed treated areas within 21 days after application.

SPECIALTY USES

Crops	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.

Crops	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 (Arbovitae, 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

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 (tsp./G.)
1-3 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

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 Leafminer Tent Caterpillar* Lace Bugs Leafrollers	1-3 lb (5-3 oz.)	As the insects begin to appear	Apply the specified amount of ORTHENE 75 S Soluble Powder per 100 gals. water with a hydraulic sprayer. The addition of a surfactant improves control of Gypsy Moth larvae.
	Douglas Fir Tussock Moth Larvae Gypsy Moth Larvae* Webworms	2-3 lb (10-5 oz.)	As the insects begin to appear	*Mist blower application. Apply rates to 1-1.3 lbs. per 100 gals. water for Gypsy Moth control or 10 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 when there is continuous crawler production.	Do not apply to suckle, e.g., Bay Laurel, Cottonwood, Lombardy Poplar and Viburnum suspensum.
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.	Nursery crops, defoliate trees and shrubs. Apply ORTHENE 75 S Soluble Powder per 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	

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Camellia Sandra Peony Roses Sedum Statice Saw-flower Yarrow Zinnia				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

Plants	Insects	Amount ORTHENE 75 S Per 100 Gals.	Time of Application	Recommended Application
Roses	Leafrollers	1/2 to 1 lb. (10.5 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 gals. water with a hydraulic sprayer as a full coverage spray.
Foliage Plants Orchids Anthurums Cacti Poinsettias	Aphids	1/2 lb. (5.3 oz.)	As aphids begin to appear.	Apply the specified amount of ORTHENE 75 S Soluble Powder in 100 gals. water with a hydraulic sprayer as a full coverage spray.
	Mealybugs Thrips Whiteflies	1/2 lb. (10.5 oz.)	As the insects begin to appear. A repeat application, at a 2 week interval, may be necessary for control of mealybugs and whiteflies.	The addition of a wetting agent may be required on difficult to wet foliage.
	Scales (Crawlers)	1/2 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.	Caution: Phytotoxicity has occurred on the following foliage plants: <i>Blechnum gibbum</i> , <i>Cissus antarctica</i> , <i>Ficus triangularis</i> , <i>Fittonia verschaffeltii</i> , <i>Maranta leuconeuva kerkhovensis</i> , <i>Pachystachya lutea</i> , <i>Plectranthus australis</i> , <i>Polypodium aureum</i> , <i>Polystichum</i> , <i>Pteris ensiformis</i> , <i>Tolmiea 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 forma- tion may result in phytotoxicity on certain varieties.
	Sweet Potato Whiteflies (except CA and NY)	1/2 lb. (5.3 oz.) plus TAME 2.4 EC Spray 10 1/2 fl. oz. (0.2 lb. ai)	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 fl. oz./100 gals. 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 instruc- tions on the alternation of TAME plus ORTHENE and TAME alone and the rotation instructions to avoid potential resistance.
Roses Carnations Chrysanthemums	Aphids Thrips	1/2 lb. (10.5 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 gals. 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, Bonnie Jean, Dixie, Garland, Gem, Iceberg, Pride, Showoff, Statesman, Tully 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.

Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops 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 inclined to settle.