



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

JUL 24 1991

Valent U.S.A. Corporation
1333 N. California Blvd.
Suite 600
Walnut Creek, CA 94596-8025

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OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

Dear Ms. DiMaggio:

Subject: ORTHENE 75 S Soluble Powder
EPA Registration no. 59639-26
Your Application for Pesticide Amendment
Dated July 1, 1991

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable provided that you:

1. Make the labeling change listed below before you release the product for shipment bearing the revised labeling:

- The Environmental Hazards statement, "Do not apply directly to water or wetlands (swamps, bogs marshes, and potholes)", must be changed to read:

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.

2. Submit a copy of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,

Robert A. Forrest
Product Manager (14)
Insecticide-Rodenticide Branch
Registration Division (H7504C)

MADDER Disk 1 7/23/91

ORTHENE[®]

75 S

Soluble Powder

(INSECTICIDE)

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

Active Ingredients
Acetophenone 1,1-Dimethyl-2-ethoxy-3-phenylpropan-1-ol
ORTHENE 75 S Acetophenone
U.S. Pat. No. 3,934,417

By Wt.
75%
25%

Manufactured for
Valent U.S.A. Corporation © 1991
Vallejo, CA 94586-0025
A Firm of G. Alade in U.S.A.
EPA Reg. No. 59635-75 AA

ORTHENE KILLS FIRE ANTS

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

Irritant 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

If swallowed: Drink 1 or 2 glasses of water for throat 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 if it is 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.

First Aid Symptoms: Emergency information: Call 800-457-2022. Acetophenone is a cholinesterase inhibitor. If signs of cholinesterase inhibition appear, atropine is antidote. 2 PAS may also be used in conjunction with atropine but should not be used alone.

WORKER SAFETY

USE ONLY WHEN WEARING THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT DURING MIXING, LOADING, APPLICATION, REPAIR, AND CLEANING OF MIXING, LOADING, AND APPLICATION EQUIPMENT AND DISPOSAL OF THE 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 is likely, such as during loading, wear a hood or wide-brimmed hat. **WORKER SAFETY:** Always wash hands, face and arms with soap and water before smoking, eating, drinking or sucking. **AFTER WORK:** Before removing gloves, wash them with soap and water. Take off all work clothes and shoes. Shower using soap and water. Wear only clean clothes when leaving job. Do not wear contaminated clothing. Personal and protective clothing worn during work must be laundered separately from household articles. Store protective clothing separately from personal clothing. Clean or launder protective clothing after each use.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds. Applications may adversely affect birds in rangeland treatment areas. Do not apply directly to water or wetlands (swamps, bogs, marshes and ponds). Cover or 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.

REENTRY STATEMENT

Keep all unprotected persons out of spraying areas or vicinity where there may be drift. For use on agricultural crops, commercially grown ornamentals, commercial lawns, and in greenhouses, reentry into treated areas is prohibited for 24 hours after the end of application unless the protective clothing specified above 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. Certain states may require more restrictive reentry intervals. Consult your State Department of Agriculture for further information.

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

PRECAUTIONS

Apply or distribute only by granular application systems. Do not apply by broadcast or any other crop, or use crop using any other type of irrigation system.

Table of Equivalents

Amount of ORTHENE 75 S Soluble Powder	1 lb	2 lb	3 lb	4 lb	5 lb
Amount Active Ingredient	1 lb	2 lb	3 lb	4 lb	5 lb

COTTON

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Cotton	Fireflies	2 oz to 4 oz	Apply in water at 3 to 10 gals spray per acre by air maximum 5 gals/acre in CA, AZ or 10 to 25 gals spray per acre by ground.	21
	Plantbugs (legals)	1 to 1 1/2 lbs to 1 1/2 lbs (CA, AZ)		
	Firehopper	1 lb	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Cotton Aphid (Whitely)	1 to 1 1/2 lbs		
	Armyworms	1 to 1 1/2 lbs	Do not feed grain trash to livestock or allow animals to graze on treated areas.	
	Cabbage Looper	1 to 1 1/2 lbs		
	Budworm	1 to 1 1/2 lbs		
	Tomato Budworm	1 to 1 1/2 lbs (CA, AZ)		
	Eggs	1 to 1 1/2 lbs	Eggs - Use higher rate for legume crops that have migrated into cotton.	
	DEADEND™	1 to 1 1/2 lbs	Budworm and Tobacco Budworm - Early season light infestations use 1/2 lb. per acre and late season materials to severe infestations use 1 to 1 1/2 lb. per acre. Apply when eggs appear and repeat at 3 to 7 day spray interval.	
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	Firehopper	1 lb	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Budworm	1 to 1 1/2 lbs	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Tomato Budworm	1 to 1 1/2 lbs (CA, AZ)	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Eggs	1 to 1 1/2 lbs	Eggs - Use higher rate for legume crops that have migrated into cotton.	
	DEADEND™	1 to 1 1/2 lbs	Budworm and Tobacco Budworm - Early season light infestations use 1/2 lb. per acre and late season materials to severe infestations use 1 to 1 1/2 lb. per acre. Apply when eggs appear and repeat at 3 to 7 day spray interval.	
	Plantbugs (CA, AZ)	1 lb	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Firehopper	1 lb	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Budworm	1 to 1 1/2 lbs	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Tomato Budworm	1 to 1 1/2 lbs (CA, AZ)	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Eggs	1 to 1 1/2 lbs	Eggs - Use higher rate for legume crops that have migrated into cotton.	
	DEADEND™	1 to 1 1/2 lbs	Budworm and Tobacco Budworm - Early season light infestations use 1/2 lb. per acre and late season materials to severe infestations use 1 to 1 1/2 lb. per acre. Apply when eggs appear and repeat at 3 to 7 day spray interval.	
	Plantbugs (CA, AZ)	1 lb	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Firehopper	1 lb	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Budworm	1 to 1 1/2 lbs	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Tomato Budworm	1 to 1 1/2 lbs (CA, AZ)	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Eggs	1 to 1 1/2 lbs	Eggs - Use higher rate for legume crops that have migrated into cotton.	
	DEADEND™	1 to 1 1/2 lbs	Budworm and Tobacco Budworm - Early season light infestations use 1/2 lb. per acre and late season materials to severe infestations use 1 to 1 1/2 lb. per acre. Apply when eggs appear and repeat at 3 to 7 day spray interval.	
	Plantbugs (CA, AZ)	1 lb	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
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	Budworm	1 to 1 1/2 lbs	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Tomato Budworm	1 to 1 1/2 lbs (CA, AZ)	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Eggs	1 to 1 1/2 lbs	Eggs - Use higher rate for legume crops that have migrated into cotton.	
	DEADEND™	1 to 1 1/2 lbs	Budworm and Tobacco Budworm - Early season light infestations use 1/2 lb. per acre and late season materials to severe infestations use 1 to 1 1/2 lb. per acre. Apply when eggs appear and repeat at 3 to 7 day spray interval.	
	Plantbugs (CA, AZ)	1 lb	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Firehopper	1 lb	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Budworm	1 to 1 1/2 lbs	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Tomato Budworm	1 to 1 1/2 lbs (CA, AZ)	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	
	Eggs	1 to 1 1/2 lbs	Eggs - Use	

Crop	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Cotton (except CA AZ)	Tobacco Budworm	2.3 lb 2.3 R 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 or graze livestock or allow animals to graze treated areas. Do not apply more than two (2) lbs. active ingredient of PYRINEX to a crop in a growing season. All applicable directions, restric- tions and precautions on the EPA registered labels are to be followed.	21

**COTTON SEED HOPPER BEET 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 effective insect control. To obtain even coverage, fill planter box 1/2 full of seed and 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 desired amount of ORTHENE 75 S Soluble Powder followed by thorough mixing. For improved mixing results seed with ORTHENE 75 S Soluble Powder in a suitable container then place measured seed into planter box. Loss of ORTHENE 75 S Soluble Powder will occur if or planters are used. Plants grown from thoroughly covered seed will not require 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 1.0 lb active	Refer to the ORTHENE 75 S conversion chart before making product application.

ORTHENE 75 S CONVERSION CHART

LB A.I. TO OZ FORMULATED PRODUCT

0.5	10.2
0.6	12.2
0.7	14.2
0.8	16.2
0.9	18.2
1.0	21.3

Apply 0.5 to 1.0 lb active ORTHENE 75 S in
3 to 5 gals. of water per acre as an in fur
row spray.

NOTE: For the Blacklands of Texas use only
the 10 lb active ORTHENE 75 S and 21.3
oz formulated product per acre. ORTHENE
75 S can be mixed with fungicides that are
sprayed in furrows for disease control.

Flat fan nozzles used for in furrow applica-
tion should be set so that the formed 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 deposi-
tion in the seed furrow and should be a
warning. 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.

FIELD CROPS

Crops	Insects	Amount ORTHENE 75 S Per Acre	Further Use Instructions	Days to Harvest
Peanut Soybean	Aphidid Thrips Cutworm	1 lb	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 spray more than 21 lbs per acre per season.	14
Soybean	Grasshoppers Soybean looper Cabbage looper Green Cloverworm Velvetbean caterpillar Bean leaf beetle Mexican bean beetle Silver Spotted Skipper (except CA)	1 to 1.5 1 to 1.5 1 lb	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 where for hay or feed.	14
Peanut	Grasshoppers Thrips	1 to 1.5 1 to 1.5	Apply in water at 10 to 50 gals spray per acre by ground or 5 to 10 gals spray per acre by air.	14 (if dipping)
	Corn earworm Fall armyworm Cottonworm Loopers Velvetbean caterpillar	1 to 1.5 1 to 1.5	Begin applications when insects first appear and repeat as needed to maintain control. Do not feed treated forage or allow livestock to graze treated areas.	

ACCEPTED
with COMMENTS
JUL 24 1991

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59689-74

SPRINGER NATION APPLICATION TO CHAMBERLAIN

if you have questions about completion you should contact State Extension Service specialists equipment group

FACTORS OR OTHER PAPERS

do not connect an irrigation system including greenhouse systems used for pesticide application to a public water system unless the label prescribes 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 off, and repair and replace all equipment when the need arises.

The system must contain a functional check valve to vacuum relief valve and/or pressure drain appropriately located on the lift line piping to prevent water source contamination from backflow.

The secondary 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 pressure to prevent fuel from being withdrawn.

The intake side of the injection pump and connected to the system interface to prevent radiation being drawn from the supply tank when the injection system is either automatic 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 governing pump, such as a positive displacement injection pump (e.g., diaphragm pump), etc., very

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

Soak Set System: Apply species 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. Use a 30 to 60 minute injection as a separate application not associated with a regular irrigation. Allow time for an insect to flush the pesticide through an emitter 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.

NOTE: Connection must be maintained in the chemical supply tank during the entire period of insect application. Inlet the product with a positive displacement pump into the main line ahead of a right angle turn to ensure proper mixing.

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

Crop	Insect	Amount Ointment P.S. per Acre	Further Use Instructions	Days to Re-treat
Beans and Lima Beans (Dry and S. Cultivars)	Fire-ant grasshoppers Aphids Bean leaf beetle Bean weevil Cabbage rooter Cutworms Flea Groundsquirrel Grasshoppers Mexican bean beetle Planthopper Stygmist Soybean weevil Thrips Whitefly Armyworms Corn earworm European corn borer	3 to 2.5 lbs 2.5 to 1.5 lbs 1 to 1.5 lbs	Apply in water at a minimum of 100 gals spray per acre by ground. Apply when eggs or insects first appear. Repeat at 7 to 10 day intervals as necessary. Specific insect instructions use higher rates. Do not feed trimmings to livestock or allow animals to graze in treated areas.	4 to 5 days
Brussels Sprouts Cauliflower	Green peach aphid Cabbage looper Diamondback moth Imported cabbage worm	2.5 to 1.5 lbs 1.5 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 application when insects or eggs first appear. Repeat application as needed. Do not apply more than 5 lbs per acre per season to Brussels Sprouts. Do not feed trimmings to livestock or allow animals to graze in treated areas.	4 to 5 days
Celery	Green peach aphid Beet and leaf-miner Cabbage looper	2.5 to 1.5 lbs 1.5 lbs	Apply in water at 50 to 100 gals spray per acre by ground or a minimum of 5 gals per acre by air. Apply when eggs or insects appear and repeat at a 7 to 10 day interval as necessary to maintain control. Trim plants tops removed before shipment or use. Do not use trimmings for food or feed.	4 to 5 days
Head Lettuce Crisphead (Iceberg)	Aster leafhopper Green peach aphid Cabbage rooter Armyworms	2.5 to 1.5 lbs 1.5 lbs	Apply in water at 25 to 100 gals spray per acre by air or 10 to 50 gals spray per acre broadcast by ground. Apply as necessary to maintain control. Do not apply more than 2.5 lbs per acre by ground. 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.	4 to 5 days
Peppers (non bell type)	Aphids	2.5 lb	For use in southwestern Eastern States and Puerto Rico only. Apply in water at 40 to 150 gals spray per acre in the ground or by air. Repeat at 7 to 10 day intervals as necessary. Do not exceed 3 applications per season.	4 to 5 days
Sweet Peppers (Bell type)	Grasshoppers Cabbage looper Green peach aphid Tomato worm European corn borer	1.5 to 2.5 lbs 2.5 to 1.5 lbs 1 to 1.5 lbs	Apply in water at a minimum of 5 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 level.	4 to 5 days

BEST

Fruit flies, houseflies, and other pests				
Crops	Insects	Amount collected, \$5 Per Acre	Further Use (Investment)	Save to Harvest
Pasture Soybeans Wheatland	Grasshoppers Mole crickets Black Grass Worms	1 to 1.50 to 0.125 to acres investment	Apply 1 acre at a minimum of 10 gal. spray per acre or 10 to 20 gal. spray per acre by hand. Use the higher rate in thicker vegetation or on larger insects. Additional may be added to the containing dust and reduce percentage of insect spray. Do not make more than one application per season. Do not spray when harvesting is in progress or about 30 days before.	21 per hay

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1911S AND 1911S-1

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

Plagues	Location	Amount ORTHEME 75 S	Time of Application	Recommended Application
furze	Imported Fire Arms	Amount Treatment— Dry Blasting Every distri- bute 1/2 to 2 bags over the mound	For best results apply the material in the early morning or late afternoon when the ants are most active	Apply the specified amount of ORTHEME 75 S Sulfur Powder as directed Lime in treated areas may be mixed
		Brown Birds W. S. S. S. S. pail of water Apply 1 gal of mix to each mound into by spraying the mound until it is wet and then 2 (two) 1/2 gals of water cover around the mound	Applicators must wear goggles and dry clothes may be irritating due to the location of the ants deep within the nest	Do not treat mound more than once per season

Planning	Methods	Amount ORTHOMENE 75 S Per 1,000 Sq. Ft.	Time of Application	Recommended Application
Lawns	Top Dressing Top Dressing Spot Treatment Spot Treatment	1.0 lb. per 1,000 Sq. Ft. 1.0 lb. per 1,000 Sq. Ft. 1.0 lb. per 1,000 Sq. Ft. 1.0 lb. per 1,000 Sq. Ft.	As the insects become apparent as necessary	Apply the specified amount of ORTHOMENE 75 S per 1,000 sq. ft. Use a minimum of 15 gal. of water per 1,000 sq. ft. No adverse pH coverage

OUTDOOR WALK AND FILTERING STATION

Location	Insights	Estimated # of Persons	Time of Apprehension	Recommended Apprehension
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ORTHENE 75 S Soluble Powder
59639-26
Submitted July 1, 1991
File Code 771.1991

Copy A

Sweet Potato Whiteflies	1/2 lb. (5.3 oz.) plus TAME 2.4 EC Spray 10 2/3 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 75S 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 alternation of TAME plus ORTHENE and TAME alone and the rotation instructions to avoid potential resistance.
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File Code 771, 1991
Orthene 75 S Soluble Powder
59639-26
Submitted July 1, 1991

Copy B Application of ORTHENE 75S Soluble Powder on poinsettias after
bract formation may result in phytotoxicity on certain varieties.

Copy C Do not apply to chrysanthemums and roses with open flowers.

771
75 S
59639-26
Submitted July 1, 1991