

ORTHENE® 97

(Soluble Insecticide)

For Use Only By Professional Applicators

ACTIVE INGREDIENT:

*Acephate..... 97.4%

INERT INGREDIENTS:..... 2.6%

TOTAL:..... 100.0%

*O,S-Dimethyl acetylphosphoramidothioate

U.S. Patent. No. 6,013,272

By Weight

Engineering Controls: Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

The use of human flaggers is prohibited.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
Acephate is an organophosphate, cholinesterase inhibitor.	
If swallowed:	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
If in eyes:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.• Call a poison control center or doctor for further treatment advice.

EMERGENCY INFORMATION
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY: Transportation: CHEMTREC.....1-800-424-9300 Other: AMVAC.....1-323-264-3910

NOTE TO PHYSICIAN
This material contains a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure but decisions regarding treatment will usually need to be made before test results are available. If signs of cholinesterase inhibition appear, atropine sulfate is antidotal, 2-PAM (PROTOPAM) is also antidotal and may be used in conjunction with atropine but should not be used alone.

USER SAFETY RECOMMENDATION

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Cover or soil-incorporate spills.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permitted and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

This product and its degradate are highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively 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.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Mixers, Loaders, Applicators and Other Handlers must wear: Long sleeved shirt and long pants, chemical-resistant gloves such as Butyl rubber ≥ 14 mils, Nitrile rubber ≥ 14 mils and Neoprene ≥ 14 mils and shoes plus socks.

In addition, all Mixers and Loaders and all Applicators using low pressure hand wand application equipment must wear: A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approved number prefix TC-21C or a NIOSH-approved respirator with any N, R, P or HE filter. **See Engineering Controls for additional requirements.**

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
- chemical resistant gloves made of any waterproof material and
- shoes plus socks.

EPA Reg. No. 5481-8978

EPA Est. No.

NET CONTENTS:

AS MARKED ON CONTAINER



4100 E. Washington Blvd.
Los Angeles, CA 90023, USA

1-323-264-3910 • www.amvac-chemical.com

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.

Do not enter or allow others to enter until sprays have dried.

Not for use on agricultural establishments in hopper-box, planter-box, slurry box or other seed treatment applications at, or immediately before, planting.

TANK MIXES

NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor.

Read and follow the entire label of each product to be used in the tank mix with this product.

GENERAL USE RESTRICTIONS

- For use on turf, use limited to sod farms and golf courses, except when applying to mound or spot treatment for fire ant and harvester ant control.
- Do not apply with low pressure handwand except for control of fire ants as a mound treatment and when used on ornamental trees, shrubs and floral plants grown for non-agricultural or non-commercial use.
- Not for indoor residential use. For greenhouse use, use is limited to commercial greenhouses for use on ornamental, floral and foliage plants and tobacco (floatbed application).

CHEMIGATION

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.

GENERAL INFORMATION

MIXING INSTRUCTIONS

Thoroughly clean all sprayer components prior to mixing. Add approximately 1/2 of the required amount of water to the spray tank and begin agitation. Add the required amount of ORTHENE 97 insecticide and mix thoroughly. Then add other tank mix partners or foliar feed additives and the remaining water. Maintain agitation during filling and spraying to ensure a uniform spray mixture.

For application equipment which has minimal agitation, such as tobacco transplant water equipment, proper attention to mixing the ORTHENE 97 product should be given. With tobacco transplant water applications, the ORTHENE 97 product should be premixed in water to form a slurry prior to putting the product into the transplant water applicator. If premixing is not done, then adequate time should be allowed for the product to dissolve in the transplant water prior to beginning application.

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions, (e.g., wind directions, wind speed, temperature, relative humidity) and method of application (e.g. ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator and grower must evaluate all factors and make appropriate adjustments when applying this product.

- All aerial, ground and air-assisted/airblast application equipment must be properly maintained and calibrated using water as carrier. Do not apply this product as an ultralow (ULV) spray, or in any carrier other than water, except as specified in the instructions for "NON-CROP AREAS – Wasteland".
- Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Do not apply at wind speeds greater than 10 mph at the application site.
- Make applications when wind velocity favors on-target product deposition (approximately 3 to 10 mph).
- Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage.
- For aerial applications, do not apply at heights greater than 10 feet (consistent with flight safety).
- For airblast applications, direct spray above foliage and turn off outward pointing nozzles at row ends and outer rows.
- For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or rotor diameter.
- For ground applications, do not apply at heights greater than 4 feet.

BEANS AND LIMA BEANS - Dry and Succulent Forms

GENERAL USE PRECAUTIONS

- Do not feed treated vines to livestock.
- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 per crop cycle.
- For repeat applications use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

TABLE 1. BEANS AND LIMA BEANS - Dry and Succulent Forms - Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
FOLIAR	Fleahoppers Grasshopper	1/4 to 1/2 lb. (4 to 8 oz.)	Apply when eggs or insects first appear.	14 (snapbeans - succulent or dry beans)
	By Ground: 20 to 100 gals./A of spray. By Air: Minimum of 2 gals./A of spray.	Aphid (excluding Black Bean Aphid) Bean Leaf Beetle Bean Leafroller Cabbage Looper Cutworm Green Cloverworm Leafhoppers Mexican Bean Beetle Plantbugs (Lygus) Soybean Looper Thrips Whitefly (except potato or Silverleaf Whitefly)	1/2 to 1.0 lb. (8 to 16 oz.)	Use higher rates for severe insect infestations.
	Armyworm (excluding Beet Armyworm) Corn Earworm European Corn Borer	3/4 to 1.0 lb. (12 to 16 oz.)		

CELERY

GENERAL USE PRECAUTIONS

- All celery must be trimmed (tops removed) before shipment for use.
- Do not use trimmed tops for food or feed.
- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 per crop cycle.
- For repeat applications use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

TABLE 2. CELERY - Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
FOLIAR	Green Peach Aphid	1/2 to 1.0 lb. (8 to 16 oz.)	Apply when eggs or insects first appear.	21
By Ground: 50 to 100 gals./A of spray. By Air: Minimum of 5 gals./A of spray.	Cabbage Looper Fall Armyworm	1.0 lb. (16 oz.)		

COLE CROPS – Brussels Sprouts and Cauliflower

GENERAL USE PRECAUTIONS

- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 per crop cycle.
- Do not feed trimmings to livestock or allow animals to graze in treated areas.
- For repeat applications use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

TABLE 3. COLE CROPS - Brussels Sprouts and Cauliflower - Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
FOLIAR By Ground: 25 to 150 gals./A of spray. By Air: Minimum of 5 gals./A of spray.	Green Peach Aphid	1/2 to 1.0 lb. (8 to 16 oz.)	Use the high rate when heavy infestations of Aphid are present. Apply when eggs or insects first appear. Diamondback Moth Larvae: This insect has demonstrated an ability to develop resistance to various classes of insecticides. Consult your local Agricultural Extension Service for current recommended control practices for this insect.	14
	Cabbage Looper Diamondback Moth Larvae Imported Cabbage Worm	1.0 lb. (16 oz.)		

COMMERCIALY TREATED COTTONSEED

GENERAL USE PRECAUTIONS

- When using formulations that do not contain dye, compliance with 21 CFR Chapter 1, Section 2.5 requires that all seed treated with pesticide must be colored to distinguish from, and prevent subsequent inadvertent use as, food for human, or feed for animals.
- Treated seed must not be used for, or mixed with, food or animal feed, or processed for oil. Seed treated with ORTHENE 97 may be considered adulterated under state and federal laws if sold or shipped as food or feedstuffs. Seed commercially treated with ORTHENE 97 must be labelled as follows: "TREATED SEED DO NOT USE FOR FOOD, FEED OR OIL."
- Observe all precautions and limitations on labeling of all products used in mixtures.

TABLE 4. COMMERCIALY TREATED COTTONSEED – Directions for Use

PESTS CONTROLLED	AMOUNT PER 100 LBS. COTTONSEED	EFFICACY	REMARKS
Cotton Aphid Thrips (including Western Flower Thrips)	6.4 oz. (0.4 lb.)	Gives effective reduction of Thrips and Cotton Aphid for up to 3 weeks after planting.	ORTHENE 97 contain a water-soluble systemic insecticide which helps to reduce injury to cotton seedlings by several insects. ORTHENE 97 can be mixed in the slurry tank with most of the fungicide seed treatments in common use. ORTHENE 97 can also be applied as a separate treatment using enough water to give adequate coverage of the seed. ORTHENE 97 dissolve quickly in water with a minimum of agitation.
Black (Greasy) Cutworm	6.4 oz. (0.4 lb.)	Gives effective reduction of Black (Greasy) Cutworm from planting through the 3rd to 4th leaf stage of development. When planting into fields where large Cutworm are present (5th instar and larger) economic damage may occur.	

COTTON

GENERAL USE PRECAUTIONS

- Do not use treated seed for food or feed purposes or process for oil.
- Do not feed treated forage or gin trash to livestock.
- Do not allow animals to graze on treated areas.
- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 per crop cycle. This includes the use of ORTHENE 97 in commercial seed treatment, in furrow spray, and foliar applications.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

For Aerial Application:

- Do not apply more than 1 lb./A ORTHENE 97 per application to cotton grown in AZ and CA.
- Do not apply more than 3/4 lb./A ORTHENE 97 per application to cotton grown in all other states except AZ and CA.

TABLE 5. COTTON - Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS ¹	DAYS TO HARVEST
IN FURROW By Ground: 3 to 5 gals./A of spray.	Aphid (excluding Cotton Aphid in AZ & CA) Black (Greasy) Cutworm (except CA) Thrips (including Western Flower Thrips)	1/2 to 1.0 lb. (8 to 16 oz.)	NOTE: For the Blacklands of Texas use 1.0 lb./A ORTHENE 97. Use flat fan nozzles for in furrow application. Align nozzles to ensure good spray deposition into the seed furrow. Cone type nozzles are not recommended since unacceptable spray deposition may occur. Securely fasten spray system tubing to furrow opener and check frequently to ensure proper positioning and operation. ORTHENE 97 can be mixed with fungicides that are sprayed in furrow for disease control.	
FOLIAR By Ground: 10 to 25 gals./A of spray. By Air: 3 to 10 gals./A of spray (minimum of 5 gals./A in AZ & CA). For Aerial Application • Do not apply more than 1 lb./A ORTHENE 97 per application to cotton grown in AZ and CA. • Do not apply more than 3/4 lb./A ORTHENE 97 per application to cotton grown in all other states except AZ and CA.	Thrips (including Western Flower Thrips)	2.5 oz. to 3.0 oz.	Apply when eggs or insects first appear.	21
	Plantbugs (Lygus)	1/4 to 1.0 lb. (4 to 16 oz.) 3/4 to 1.0 lb. (AZ & CA)	Apply when eggs or insects first appear. Use highest rate for Lygus adults that have migrated into cotton.	21
	Fleahopper	1/4 lb. (4 oz.)	Apply when eggs or insects first appear.	21
	Cotton Aphid (excluding AZ & CA)	1/2 to 1.0 lb. (8 to 16 oz.)	This insect may develop resistance to various classes of insecticides. Consult your local Agricultural Extension Service for current control recommendations.	21
	Whitefly (excluding Sweetpotato Whitefly/Silverleaf Whitefly) Armyworm (excluding Beet Armyworm) Cabbage Looper	1/2 to 1.0 lb. (8 to 16 oz.) 1.0 lb. (16 oz.)	Apply when eggs first appear.	21

¹For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

continued

TABLE 5. COTTON - Directions for Use continued

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS ¹	DAYS TO HARVEST
FOLIAR By Ground: 10 to 25 gals./A of spray. By Air: 3 to 10 gals./A of spray (minimum of 5 gals./A in AZ & CA). For Aerial Application <ul style="list-style-type: none"> Do not apply more than 1 lb./A ORTHENE 97 per application to cotton grown in AZ and CA. Do not apply more than 3/4 lb./A ORTHENE 97 per application to cotton grown in all other states except AZ and CA. 	Bollworm Tobacco Budworm Adults Larvae	1/2 to 1.0 lb. (8 to 16 oz.) (East of Rockies) 1.0 lb. (AZ & CA)	Early Season: Use 1/2 lb. /A for light infestation. Mid and Late Season: Use 3/4 to 1.0 lbs./A for moderate to severe infestations. Apply when eggs first appear. Moths of budworm larvae are controlled by direct contact with spray. Moth kill is most likely to occur when late evening applications are made. DEADHATCH: Control of emerging larvae by consumption of treated egg casings.	21
	Eggs/ DEADHATCH®	1/4 to 1/2 lb.	Apply when eggs first appear.	
	Stinkbugs	3/4 lb. (12 oz.)	Apply when eggs first appear.	21
	Pink Bollworm (AZ & CA)	1.0 lb. (16 oz.)	Apply when insects first appear.	21
Cutworm	3/4 lb. (12 oz.)	Ground application is recommended. Aerial applications are less effective, but may be used. Control is most effective when ground application is made in the evenings and sprays are directed toward the base and lower portion of plant. Apply when insects first appear or damage is first noted.	21	

¹For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

RESISTANCE MANAGEMENT

Cotton pest control programs should employ a properly designed resistance management strategy. Such resistance management strategies include mixture or rotation of alternative classes of chemistry including organophosphates, carbamates, pyrethroids or insect growth regulators. Consult your state or area agricultural extension service for local resistance management strategies and advice on alternative insecticides.

COTTON TANK MIXES

GENERAL USE PRECAUTIONS

- Do not feed treated forage or gin trash to livestock.
- Do not allow livestock to graze on treated areas.
- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 per crop cycle. This includes the use of ORTHENE 97 in commercial seed treatment, in-furrow spray and foliar applications.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

For Aerial Application:

- Do not apply more than 1 lb./A ORTHENE 97 per application to cotton grown in AZ and CA.
- Do not apply more than 3/4 lb./A ORTHENE 97 per application to cotton grown in all other states except AZ and CA.

Always read and follow all label directions when using any pesticide alone or in tank mix combinations. Observe all restrictions and precautions which appear on all product labels. The most restrictive labeling applies when using a tank mix.

TABLE 6. COTTON TANK MIXES - Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	ORTHENE 97 AND TANK MIX PARTNER	AMOUNT OF ORTHENE 97 + TANK MIX PARTNER PER ACRE	REMARKS ¹	DAYS TO HARVEST
FOLIAR By Ground: 10 to 25 gals./A spray. By Air: 3 to 10 gals./A of spray (minimum 5 gals./A in CA). For Aerial Application <ul style="list-style-type: none"> Do not apply more than 1 lb./A ORTHENE 97 per application to cotton grown in AZ and CA. Do not apply more than 3/4 lb./A ORTHENE 97 per application to cotton grown in all other states except AZ and CA. 	Sweetpotato Whitefly (Silverleaf Whitefly)	ORTHENE 97 +	1/2 to 1 lb. (8 to 16 oz.) +	Follow all applicable directions, restrictions and precautions on the EPA registered label for Danitol 2.4 EC Spray. Use a minimum application rate of 10 2/3 fl. oz./A Danitol (0.2 lb. ai./A) in CA and AZ.	21
	DANITOL® 2.4 EC	8 to 16 fl. oz.			
Armyworm (excluding Beet Armyworm) Bollworm Cabbage Looper Cotton Aphid Cutworm Fleahopper Grasshopper Pink Bollworm Plantbugs (Lygus, Mirids) Salt Marsh Caterpillar Thrips (Including Western Flower Thrips) Tobacco Budworm Whitefly (Excluding Sweetpotato/Silverleaf Whitefly)	ORTHENE 97 +	LORSBAN® 4E	1/4 to 1.0 lb. (4 to 16 oz.) +	Follow all applicable directions, restrictions and precautions on the EPA registered label for LORSBAN 4 E. Cutworm: Use 3/4 lb./A of ORTHENE 97. By Ground: Ground application is recommended. Control is most effective when ground application is made in the evenings and sprays are directed toward the base and lower portion of plant. By Air: Aerial applications are less effective, but may be used. Apply when insects first appear or when damage is first noted.	21

¹For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

RESISTANCE MANAGEMENT

Cotton pest control programs, especially those for control of Silverleaf Whitefly populations, should employ a properly designed resistance management strategy. Such resistance management strategies include mixture or rotation of alternative classes of chemistry including organophosphates, carbamates, pyrethroids or insect growth regulators. Consult your state or area agricultural extension service for local resistance management strategies and advice on alternative insecticides.

HEAD LETTUCE - Crisphed Type Only

GENERAL USE PRECAUTIONS

- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 per crop cycle.
- Do not feed trimmings to livestock or allow animals to graze on treated areas.
- AZ & CA, Desert Areas: Do not apply after first head begins to form in crops which germinate from mid-September through November.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

TABLE 9. HEAD LETTUCE - Crisphed Type Only – Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
FOLIAR By Ground: 10 to 60 gals./A of spray broadcast. By Air: Minimum of 5 gals./A of spray.	Aster Leafhopper Green Peach Aphid	1/2 to 1.0 lb. (8 to 16 oz.)		21 Spring, Summer and early Fall crops in all areas, Winter crops in Florida and Texas, late Fall crops in Arizona and Winter crops in Arizona and California.
	Armyworm (excluding Beet Armyworm) Cabbage Looper	1.0 lb. (16 oz.)		

MINT - Peppermint and Spearmint

GENERAL USE PRECAUTIONS

- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 per crop cycle.
- Do not graze treated areas.
- Do not feed spent mint hay to animals.

TABLE 10. MINT - Peppermint and Spearmint – Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
FOLIAR By Ground: 20 to 100 gals./A of spray. By Air: 5 to 10 gals./A of spray.	Alfalfa Looper Aphid Cutworm	1.0 lb. (16 oz.)	Apply when eggs or insects first appear. Make one repeat application, at a minimum of a 7 day interval, if necessary, to maintain control.	14
	FOLIAR By Ground: 40 to 100 gals./A of spray.	Strawberry Root Weevil Adult Black Vine Weevil Adult	1.0 lb. (16 oz.)	Strawberry Root and Black Vine Weevil: For control, apply in water in a minimum of 40 gals. spray per acre by ground. Good spray coverage and canopy spray penetration is critical for control. Increase spray volume and pressure with tall or dense mint canopy. Apply after adult emergence is complete but prior to egg laying. Apply at dusk or during the night on a warm still evening. Make one repeat application, at a minimum of a 7 day interval, if necessary to maintain control.

NON-BEARING CITRUS - Directions For Use In Agricultural Settings (Newly Planted Groves)

GENERAL USE PRECAUTIONS

- Do not graze treated areas.
- DO NOT HARVEST citrus for one year after treatment.

TABLE 11. NON-BEARING CITRUS - Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS
FOLIAR By Ground: 100 to 200 gals./A of spray.	Aphid Grasshopper Katydid Mealybug Orangedog Plantbug Thrips Whiteflies (except Sweetpotato/Silverleaf)	1/2 lb. (8 oz.)	For repeat applications, use a minimum spray interval of 3 days.
	Citrus Blackfly*	1/2 to 3/4 lb. (8 to 12 oz.)	Apply when eggs or insects first appear. Use the high rate when a heavy infestation is present. For repeat applications use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A
	Ants (excluding Fire, Harvester, Carpenter and Pharaoh Ants)	3/4 lb. (12 oz.)	For repeat applications, use a minimum spray interval of 7 days.
Spray individual juvenile or non-bearing trees for coverage with total application not to exceed specified rate in lbs. per acre. Length of residual activity will depend upon spray coverage and the amount of moisture following application.			
SOIL MOUND TREATMENT DRENCH METHOD	Ants (excluding carpenter and pharaoh)*	3/4 oz./5 gals.	Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a 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.

* Not registered in CA for control of Citrus Blackfly and Harvester Ants.

NON-CROP AREAS Field Borders, Fencerows, Roadsides, Ditchbanks, Borrow Pits

GENERAL USE PRECAUTIONS

- Do not graze or feed vegetation cut from treated areas.

TABLE 12. NON-CROP AREAS - Field Borders, Fencerows, Roadsides, Ditchbanks, Borrow Pits - Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS
FOLIAR By Ground: 10 to 20 gals./A of spray. By Air: 1 to 5 gals./A of spray (minimum of 5 gals./A in CA).	Grasshopper	1/4 lb. (4 oz.)	For early to mid-season application. Use the higher volumes when spraying dense foliage. An approved drift retardant may be added to aid in controlling drift and reducing evaporation of aerial sprays.

NON-CROP AREAS - Wasteland

GENERAL USE PRECAUTIONS

- Do not make more than one application ORTHENE 97 per season.
- Do not graze or feed vegetation cut from treated areas.

TABLE 13. NON-CROP AREAS - Wasteland – Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS
FOLIAR By Ground: 10 to 20 gals./A of spray. By Air: 1/2 gal./A of spray (minimum of 5 gals./A in CA).	Black Grass Bugs Grasshopper Mormon Crickets	1.5 oz. to 2 oz.	Use the higher volumes when spraying dense foliage. An approved drift retardant may be added to aid in controlling drift and reducing evaporation of aerial sprays.

PEANUTS

GENERAL USE PRECAUTIONS

- Do not feed treated forage or hay to livestock.
- Do not allow animals to graze on treated areas.
- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 per crop cycle. This includes the use of ORTHENE 97 on peanuts as a foliar spray in addition to the peanut planterbox seed treatment use.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

TABLE 14. PEANUTS – Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
FOLIAR By Ground: 10 to 50 gals./A of spray. By Air: 5 to 10 gals./A of spray.	Grasshopper	1/4 to 1/2 lb. (4 to 8 oz.)	Apply when eggs or insects first appear.	14 (of digging)
	Thrips	3/8 to 3/4 lb. (6 to 12 oz.)	ORTHENE 97 can be tank mixed with registered at cracking and early post-emergence peanut herbicides, provided those products do not prohibit tank mixes, provided the most restrictive of label limitations and precautions are observed, and provided no label dosage rates are exceeded. To determine physical compatibility, pour the recommended proportions of each chemical with the same proportion of water as will be present in the chemical supply tank into a suitable container, mix thoroughly and allow to stand for 5 minutes. If the combination remains mixed, or can be remixed readily, the mixture is considered physically compatible. When mixing wettable powder or dry flowable formulations, add and disperse these first, then add liquid pesticides. Conduct another compatibility test at concentrations, which will be present in the irrigation lines. If there is any separation, which cannot be remixed readily, AMVAC recommends that the combination not be used. Combinations should be kept agitated and should be applied immediately. Do not allow combinations to sit for prolonged periods in the chemical supply tank or irrigation lines.	
	Corn Earworm Fall Armyworm Leafhoppers Loopers Velvetbean Caterpillar	3/4 to 1.0 lb. (12 to 16 oz.)		

PEPPERS – Bell

GENERAL USE PRECAUTIONS

- Do not apply more than 2 1/8 lbs./A (2 lbs. ai) ORTHENE 97 per crop cycle.
- For repeat applications, use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.

TABLE 15. PEPPERS - Bell – Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
FOLIAR By Ground: 25 to 150 gals./A of spray. By Air: Minimum of 3 gals./A of spray (minimum of 5 gals./A in CA).	Grasshopper	1/4 to 1/2 lb. (4 to 8 oz.)	Apply when eggs or insects first appear.	7
	Cabbage Looper Green Peach Aphid Tobacco Hornworm	1/2 to 1.0 lb. (8 to 16 oz.)		
	European Corn Borer	3/4 to 1.0 lb. (12 to 16 oz.)		

PEPPERS – Non-Bell

FOR USE IN MIDWESTERN, EASTERN STATES AND PUERTO RICO ONLY.

GENERAL USE PRECAUTIONS

- Do not apply more than 1 lbs./A (1 lb. ai) ORTHENE 97 per crop cycle.

TABLE 16. PEPPERS - Non-Bell - Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
FOLIAR By Ground: 40 to 150 gals./A of spray.	Aphid	1/2 lb. (8 oz.)	For repeat application use a minimum spray interval of 3 days.	7

SOYBEANS

GENERAL USE PRECAUTIONS

- Do not graze or cut vines for hay or forage.
- Do not apply more than 1.5 lbs./A (1.5 lbs. ai/A) of ORTHENE 97 per season.
- Do not apply ORTHENE 97 within 14 days of harvest.
- For rates up 0.5 lb/A, at least 3 days must pass between applications of ORTHENE 97.
- For rates between 0.5 lb./A and 1.0 lbs./A, at least 7 days must pass between applications of ORTHENE 97.
- Always read and follow all label directions, restrictions and precautions when using any pesticide alone or in tank mix combinations. The most restrictive labeling applies when using a tank mix.

TABLE 17. SOYBEANS – Directions for Use

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
FOLIAR By Air: 5 to 10 gals./A of spray By Ground: 10 to 50 gals./A of spray	Grasshopper Thrips	0.25 to 0.5 lb.	Repeat treatment as necessary to maintain control, but do not exceed a maximum of 1.5 lbs./A (1.5 lbs. ai/A) per season.	14
	Potato Leafhopper Stink Bugs	0.5 to 1 lb.		
	Armyworms (except Beet) Bean Leaf Beetle Cabbage Looper Green Cloverworm Mexican Bean Beetle Soybean Aphid Threecornered Alfalfa Hopper Velvetbean Caterpillar	0.75 to 1 lb.		

TOBACCO (Except CA) - Transplant Water Application

GENERAL USE PRECAUTIONS

- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 per crop cycle. This includes the use of ORTHENE 97 in transplant water, plant bed, soil, float bed (greenhouse) and foliar applications.

TABLE 18. TOBACCO (Except CA) - Transplant Water Application - Directions for Use

CROP	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	FURTHER USE INSTRUCTIONS
Tobacco	Cutworm Flea Beetle Green Peach Aphid Potato Tuberworm Tobacco Aphid Tobacco Thrips	3/4 lb. (12 oz.)	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 foliar spray of ORTHENE 97. Apply in a minimum of 100 gals. of transplant water per acre. ORTHENE 97 should be pre-mixed in water to form a slurry solution prior to adding to the transplant water tank. Do not apply more than 3/4 lb. ORTHENE 97 per acre as a transplant water application as some phytotoxicity may occur. Make transplant water applications using mechanical transplant equipment only. Using such equipment, the insecticide/water mixture is mechanically applied directly into the soil along with the transplanted plants.

TOBACCO (Except CA) – Foliar Application

GENERAL USE PRECAUTIONS

- For repeat applications use a minimum spray interval of 3 days for application rates up to and including 1/2 lb./A and a minimum of 7 days for rates exceeding 1/2 lb./A.
- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 per crop cycle. This includes the use of ORTHENE 97 in transplant water, plant bed, soil, float bed (greenhouse) and foliar applications.

TABLE 19. TOBACCO (Except CA) - Foliar Application – Directions for Use

CROP	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	FURTHER USE INSTRUCTIONS	DAYS TO HARVEST
Tobacco (Flue-Cured, Air Cured, Dark Fire Cured)	Grasshopper	1/4 to 1/2 lb. (4 to 8 oz.)	Apply in 10 to 50 gals. water per acre with ground equipment or a minimum of 3 gals. per acre by air.	3
	Flea Beetle Green Peach Aphid Hornworm Tobacco Thrips	1/2 lb. (8 oz.)		
	Stinkbugs Tobacco Aphid Vegetable Weevils	1/2 to 3/4 lb. (8 to 12 oz.)		
	Budworm Cabbage Looper Cutworm Japanese Beetle	3/4 lb. (12 oz.)		

TOBACCO (Except CA) – Plant Bed Application

GENERAL USE PRECAUTIONS

- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 per crop cycle. This includes the use of ORTHENE 97 in transplant water, plant bed, soil, float bed (greenhouse) and foliar applications.

TABLE 20. TOBACCO (Except CA) - Plant Bed Application - Directions for Use

CROP	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	FURTHER USE INSTRUCTIONS
Tobacco Bed Treatment	Cutworm Flea Beetle Green Peach Aphid Tobacco Aphid	3/4 lb. (12 oz.)	Apply to foliage at the equivalent of 3/4 Tbsp. in 1 gal. of water per every 1,000 sq. ft. of bed. Apply evenly to insure thorough coverage. For repeat applications use a minimum spray interval of 7 days.

TOBACCO (Except CA) – Greenhouse Application

GENERAL USE PRECAUTIONS

- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 per crop cycle. This includes the use of ORTHENE 97 in transplant water, plant bed, soil, float bed (greenhouse) and foliar applications.

TABLE 21. TOBACCO (Except CA) Greenhouse Application - Directions for Use

CROP	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	FURTHER USE INSTRUCTIONS
Tobacco	Cutworm Flea Beetle Green Peach Aphid Tobacco Aphid	3/4 lb. (12 oz.)	Apply to foliage at the equivalent of 3/4 Tbsp. in 3 gals. water per every 1,000 sq. ft. of bed. Apply evenly to insure thorough coverage. For repeat applications use a minimum spray interval of 7 days. Note: Floatbed water should be disposed of in the transplanted field in either transplant water or foliar spray.

TOBACCO (Except CA) – Soil Application

GENERAL USE PRECAUTIONS

- Do not apply more than 4 1/8 lbs./A (4 lbs. ai) ORTHENE 97 per crop cycle. This includes the use of ORTHENE 97 in transplant water, plant bed, soil, float bed (greenhouse) and foliar applications.

TABLE 22. TOBACCO (Except CA) - Soil Application - Directions for Use

CROP	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	FURTHER USE INSTRUCTIONS	DAYS TO HARVEST
Tobacco	Ants (excluding carpenter, fire, harvester and pharaoh)	Drench Method: Mix 3/4 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 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.	3

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

PESTICIDE 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
1-323-264-3910

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited.

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.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions.

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