

ACEPHATE 97UP

Insecticide

ACTIVE INGREDIENT

Acephate: (O,S-Dimethyl acetylphosphoramidothioate)..... 97%*

OTHER INGREDIENTS 3%

TOTAL 100%

*U.S. and foreign patents pending

EPA Reg. No. 70506-8

KEEP OUT OF REACH OF CHILDREN CAUTION

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

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

FIRST AID

Contains an organophosphate that inhibits cholinesterase.

If swallowed	<ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by the 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

NOTE TO PHYSICIAN

Acephate is a cholinesterase inhibitor. If signs of cholinesterase inhibition appear, atropine is antidotal. 2-PAM may also be used in conjunction with atropine but should not be used alone.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators, mixers, loaders and other handlers must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks
- chemical-resistant headgear for overhead exposure

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

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds. Do not apply directly to water, or where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or soil-incorporate spills.

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

DIRECTIONS FOR USE

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

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

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

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

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

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or greenhouses.

For other non-agricultural areas, do not enter treated areas without protective clothing until the sprays have dried.

CHEMIGATION

Do not apply this product through any type of irrigation system except as specified for use on cranberries.

GENERAL USE INFORMATION

Acephate 97UP is an insecticide for control of pests on selected agricultural crops and in certain non-crop areas. The active ingredient in Acephate 97UP is acephate, a water-soluble insecticide readily absorbed by plant roots and foliage to give systemic control of feeding insects. Insect pests are generally controlled more effectively by ACEPHATE 97UP through ingestion than by contact. Application of Acephate 97UP to maintain control should be repeated only as directed.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THE LABEL MAY RESULT IN POOR INSECT CONTROL, CROP INJURY, AND/OR ILLEGAL RESIDUES.

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 the product's nature, settling is likely to occur.

MIXING AND COMPATIBILITY

Fill the spray tank one-third to one-half full of clean water with agitation running and add the required amount of Acephate 97UP Insecticide to the spray tank. Add remaining water to bring to the desired volume and maintain agitation during mixing, loading and application. Do not add any liquid fertilizers, micronutrients or adjuvants to the spray solution until the Acephate 97UP Insecticide has completely dissolved. Acephate 97UP should completely dissolve in approximately five minutes. Dissolution may be slowed by cold water, low level of agitation, or water containing high concentrations of boron or sulfur.

TANK MIXES: 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 tank mixes with this product.

USE DIRECTIONS FOR FOLIAR APPLICATIONS TO BEANS AND LIMA BEANS - Dry and Succulent Forms -

Ground Application: Apply in 20 to 100 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.

Aerial Application: Make applications of Acephate 97UP Insecticide in a minimum of 2 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Fleahoppers Grasshoppers	1/4 to 1/2 lb. (4 to 8 oz.)	Apply when eggs or insects first appear.	*Do not apply more than 2 1/8 lbs./A (2 lbs. ai) per season.
Aphids (excluding Black Bean Aphid) Bean Leaf Beetle Bean Leafroller Cabbage Looper Cutworms Green Cloverworm Leafhoppers Mexican Bean Beetle Plant bugs (Lygus) Soybean Looper Thrips Whitefly (Except Sweetpotato & Silverleaf Whitefly)	1/2 to 1.0 lb. (8 to 16 oz.)	Repeat at 7 to 10 day spray intervals as necessary to maintain control*. Use higher rates for severe insect infestations.	Snap beans—succulent or dry beans: Allow at least 14 days to elapse between final application and harvest. Lima beans—succulent form: Applications may be made up to and including the day of harvest. Do not feed treated vines to livestock.
Armyworms (excluding Beet Armyworm) Corn Earworm European Corn Borer	3/4 to 1.0 lb. (12 to 16 oz.)		

USE DIRECTIONS FOR FOLIAR APPLICATIONS TO BRUSSELS SPROUTS & CAULIFLOWER

Ground Application: Apply in 25 to 150 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.

Aerial Application: Make applications of Acephate 97UP Insecticide in a minimum of 5 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Green Peach Aphid	1/2 to 1.0 lb. (8 to 16 oz.)	Apply when eggs or insects first appear. Repeat application as necessary to maintain control*.	*Do not apply more than 2 1/8 lbs./A (2 lbs. ai) per crop cycle. Allow at least 14 days to elapse between final application and harvest. Do not feed trimmings to livestock or allow animals to graze in treated areas.
Cabbage Looper Imported Cabbage Worm	1.0 lb. (16 oz.)	Use the high rate when heavy infestations of aphids are present.	
Diamondback Moth Larvae	1.0 lb. (16 oz.)	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.	

USE DIRECTIONS FOR FOLIAR APPLICATIONS TO CELERY

Ground Application: Apply in 50 to 100 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.

Aerial Application: Make applications of Acephate 97UP Insecticide in a minimum of 5 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Green Peach Aphid	1/2 to 1.0 lb. (8 to 16 oz.)	Apply when eggs or insects first appear.	*Do not apply more than 2 1/8 lbs./A (2 lbs. ai) per season. Allow at least 21 days to elapse between final application and harvest. All celery must be trimmed (tops removed) before shipment for use. Do not use trimmed tops for food or feed.
Cabbage Looper Fall Armyworms	1.0 lb. (16 oz.)	Repeat at 3 to 10 day spray intervals as necessary to maintain control*.	

USE DIRECTIONS FOR COMMERCIALY TREATED COTTONSEED

Acephate 97UP contains a water-soluble systemic insecticide which helps to reduce injury to cotton seedlings by several insects. Acephate 97UP can be mixed in the slurry tank with most of the fungicide seed treatments in common use. It also can be applied as a separate treatment using enough water to give adequate coverage of the seed.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER 100 LBS COTTONSEED	EFFICACY	USE PRECAUTIONS AND RESTRICTIONS
Cotton Aphids Thrips (Including Western Flower Thrips)	6.4 oz (0.4 lb)	Gives effective reduction of thrips and cotton aphids for up to three weeks after planting.	When using formulations that do not contain dye, compliance with 21 CFR Chapter 1, Section 2.5 requires that all seed treated with a pesticide must be colored to distinguish from, and prevent inadvertent use as, food for man 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 Acephate 97UP may be considered
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 cutworms are present (5th instar	

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PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER 100 LBS COTTONSEED	EFFICACY	USE PRECAUTIONS AND RESTRICTIONS
Black (Greasy) Cutworm (continued)	6.4 oz (0.4 lb)	and larger), economic damage may occur.	adulterated under state and federal laws if sold or shipped as food or feed-stuffs. Seed commercially treated with Acephate 97UP must be labeled 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.

USE DIRECTIONS FOR COTTON

RESTRICTIONS APPLICABLE TO ALL USES ON COTTON:

Do not use treated seed for food or feed purposes or process for oil.

Do not feed gin trash to livestock.

Do not allow animals to graze on treated areas.

Do not apply more than 6 1/8 lbs./A (6 lbs. ai) per season. This includes the use of Acephate 97UP in commercial seed-treatment, in-furrow spray, and foliar applications.

RESISTANCE-MANAGEMENT

Cotton pest control programs, especially those for control of Silverleaf/Sweetpotato 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.

IN-FURROW APPLICATION

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS
Aphids (Excluding Cotton Aphids in AZ & CA) Black (Greasy) Cutworm (Except CA) Thrips	1/2 to 1.0 lb. (8 to 16 oz.) NOTE: For the Blacklands of Texas use 1.0 lb./A Acephate 97UP	Apply in water a 3 to 5 gals. carrier per acre as an in-furrow spray. 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. Acephate 97UP can be mixed with fungicides that are sprayed in-furrow for disease control.

FOLIAR APPLICATIONS

Ground Application: Apply in 10 to 25 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.

Aerial Application: Make applications of Acephate 97UP Insecticide in 3 to 10 gallons per acre (minimum of 5 gallons per acre in AZ & CA). Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Thrips	0.16 to 0.19 lb. (2.5 oz. to 3.0 oz.)	Apply when eggs or insects first appear. Repeat application as necessary to maintain control*.	Allow at least 21 days to elapse between final application and harvest. *See RESTRICTIONS APPLICABLE TO ALL USES ON COTTON.
Plant bugs (Lygus)	1/4 to 1.0 lb. (4 to 16 oz.) AZ & CA: 3/4 to 1.0 lb. (12 to 16 oz.)	Apply when eggs or insects first appear. Use highest rate for Lygus adults that have migrated into cotton. Repeat application as necessary to maintain control*.	
Fleahoppers	1/4 lb. (4 oz.)	Apply when eggs or insects first appear. Repeat application as necessary to maintain control*.	

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PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
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. Repeat application as necessary to maintain control*.	Allow at least 21 days to elapse between final application and harvest. *See RESTRICTIONS APPLICABLE TO ALL USES ON COTTON.
Whitefly (excluding Sweetpotato & Silverleaf Whitefly)	1/2 to 1.0 lb. (8 to 16 oz.)	Repeat application as necessary to maintain control*.	
Armyworms (excluding Beet Armyworm) Cabbage Looper	1.0 lb. (16 oz.)	Apply when eggs appear and repeat at 3 to 7 day spray intervals*.	
Bollworm Tobacco Budworm Adults Larvae Eggs (DEADHATCH®)	East of Rockies: 1/2 to 1.0 lb. (8 to 16 oz.) AZ & CA: 1.0 lb. (16 oz.)	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 appear and repeat at 3 to 7 day spray intervals*. 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.	
Stink bugs	3/4 lb. (12 oz.)	Apply when eggs appear and repeat at 3 to 7 day spray intervals*.	
Pink Bollworm (AZ & CA)	1.0 lb. (16 oz.)	Apply when insects appear and repeat at 5 to 7 day spray intervals*.	
Cutworms	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 and repeat application as necessary to maintain control*.	

COTTON TANK MIXES FOR FOLIAR APPLICATION

Ground Application: Apply in 10 to 25 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.

Aerial Application: Make aerial applications in 3 to 10 gallons per acre (minimum of 5 gallons per acre in AZ & CA). Use sufficient carrier volume to provide thorough, uniform coverage.

RESTRICTIONS APPLICABLE TO ALL USES ON COTTON:

Do not use treated seed for food or feed purposes or process for oil.

Do not feed gin trash to livestock.

Do not allow animals to graze on treated areas.

Do not apply more than 6 1/8 lbs./A (6 lbs. ai) per season. This includes the use of Acephate 97UP in commercial seed-treatment, in-furrow spray, and foliar applications.

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.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP + TANK MIX PARTNER PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Sweetpotato & Silverleaf Whitefly	1/2 lb. (8 oz.) + DANITOL® 2.4 EC 8 to 16 fl. oz.	Apply when insects first appear or when damage is first noted and repeat applications as necessary to maintain control*. Use a minimum application rate of 10 2/3 fl. oz./acre DANITOL® (0.2 lb. ai/acre) in CA and AZ. User should comply with all applicable directions, restrictions, and precautions on the EPA registered label for DANITOL® 2.4 EC Spray.	Allow at least 21 days to elapse between final application and harvest. *See RESTRICTIONS APPLICABLE TO ALL USES ON COTTON.
Armyworms (excluding Beet Armyworm) Bollworm Cabbage Looper Cotton Aphid Fleahoppers Grasshoppers Pink Bollworm Plant bugs (Lygus, Mirids) Salt Marsh Caterpillar Thrips Tobacco Budworm Whitefly (Excluding Sweetpotato & Silverleaf Whitefly)	1/4 to 1.0 lb. (4 to 16 oz.) + LORSBAN® 4E 1 to 2 pts.	User should comply with all applicable directions, restrictions, and precautions on the EPA registered label for LORSBAN® 4 E. Apply when insects first appear or when damage is first noted and repeat application as necessary to maintain control*.	
Cutworms	3/4 lb. (12 oz.) + LORSBAN® 4E 1 to 2 pts.	Apply when insects first appear or when damage is first noted and repeat application as necessary to maintain control*. Control is most effective when ground application is made in the evenings and sprays are directed toward the base and lower portion of plant. Directed, ground application is most effective. Aerial applications are less effective, but may be used.	

COTTON TANK MIXES WITH PYRETHROIDS FOR FOLIAR APPLICATIONS

Ground Application: Apply in 10 to 25 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.

Aerial Application: Make aerial applications in 3 to 5 gallons per acre (minimum of 5 gallons per acre in AZ & CA). Use sufficient carrier volume to provide thorough, uniform coverage.

RESTRICTIONS APPLICABLE TO ALL USES ON COTTON:

Do not use treated seed for food or feed purposes or process for oil.

Do not feed gin trash to livestock.

Do not allow animals to graze on treated areas.

Do not apply more than 6 1/8 lbs./A (6 lbs. ai) per season. This includes the use of Acephate 97UP in commercial seed-treatment, in-furrow spray, and foliar applications.

Always read and follow all label directions when using any pesticide alone or in tank mix combinations. Observe all restrictions and precautions that appear on all product labels.

The most restrictive labeling applies when using a tank mix. Synthetic Pyrethroids should be used within the guidelines of state and/or regional resistance management programs and recommendations.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP + TANK MIX PARTNER	APPLICATION INSTRUCTIONS	RESTRICTIONS
Aphids Bollworm Cabbage Looper Cotton Leaf Perforator Fall Armyworm Fleahoppers Pink Bollworm (AZ & CA) Plant bugs Sweetpotato & Silverleaf Whitefly Thrips Tobacco Budworm Whiteflies	1/2 to 1.0 lb./A (8 to 16 oz.) + AMMO® 2.5 EC (Follow label directions) or ASANA® XL (Follow label directions) or BAYTHROID® 2 EC (Follow label directions) or CAPTURE® 2 EC (Follow label directions) or KARATE® 1E (Follow label directions) or SCOUT® X-TRA (Follow label directions)	Begin applications when eggs or insects first appear. Repeat application as necessary to maintain control*.	Allow at least 21 days to elapse between final application and harvest. *See RESTRICTIONS APPLICABLE TO ALL USES ON COTTON.
Cutworms	3/4 lb./A (12 oz.) + Any Synthetic Pyrethroid listed above	Control is most effective when ground applications are made in the evenings and sprays are directed toward the base and lower portion of plant. Directed, ground applications are most effective. Aerial applications are less effective, but may be used.	
Stink bugs	3/4 lb./A (12 oz.) + Any Synthetic Pyrethroid listed above	Apply when eggs or insects first appear. Repeat application as necessary to maintain control*.	

USE DIRECTIONS FOR FOLIAR APPLICATIONS TO CRANBERRY

Ground Application: Apply with conventional ground equipment in sufficient water to ensure thorough coverage of the target crop.

Aerial Application: Make aerial applications in a minimum of 2 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

Chemigation Application: 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. 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 turn to ensure adequate mixing. Application of more than label-recommended quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.

GENERAL PRECAUTIONS FOR APPLICATIONS THROUGH CHEMIGATION SYSTEMS

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 systems are in place.

- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, 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.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- **Solid Set System:** 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 below.
- **Center Pivot Systems:** Inject the specified dosage per acre continuously for one complete revolution of the system. See Note below

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

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cranberry Blossomworm Cranberry Cutworm Gypsy Moth False Armyworm Fireworms Spanworms Sparganothis	1.0 lb. (16 oz.)	Apply when insects first appear*.	*Limit to one application per growing season. Do not apply more than 1.0 lb. (1.0 lb. ai) per season. Allow at least 90 days to elapse between final application and harvest. Do not apply from start of bloom until all berries set.

USE DIRECTIONS FOR FOLIAR APPLICATIONS TO HEAD LETTUCE – Crisphead Type Only –

Ground Application: Apply in 10 to 60 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.

Aerial Application: Make aerial applications in minimum of 5 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Aster Leafhopper Green Peach Aphid	1/2 to 1.0 lb. (8 to 16 oz.)	Repeat application as necessary to maintain control*.	*Do not apply more than 2 1/8 lbs./A (2 lbs. ai) per season. Allow at least 21 days to elapse between final application and harvest. Do not feed trimmings to livestock or allow animals to graze on treated areas. For use on 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. Do not apply after first head begins to form in crops which germinate from mid-September through November in desert areas of AZ & CA.
Armyworm (excluding Beet Armyworm) Cabbage Looper	1.0 lb. (16 oz.)		

USE DIRECTIONS FOR FOLIAR APPLICATIONS TO NON-BEARING CITRUS (Newly Planted Groves) – Agricultural Settings ONLY

FOLIAR APPLICATIONS

Ground Application: Apply in 100 to 200 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Aphids Grasshoppers Katydid Mealybugs Orangedog Plant bugs Thrips	1/2 lb. (8 oz.)	Apply as necessary to maintain control. Spray individual juvenile or non-bearing trees for coverage with total application not to	Do not graze treated areas. Do not harvest citrus for one year after treatment. *Not registered in California for control of Citrus Blackfly and Harvester Ants

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Whiteflies (except Sweetpotato & Silverleaf Whitefly)	1/2 lb. (8 oz.)	exceed specified rate in lbs. per acre. Length of residual activity will depend upon spray coverage and the amount of moisture following application.	Do not graze treated areas. Do not harvest citrus for one year after treatment. *Not registered in California for control of Citrus Blackfly and Harvester Ants
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. Repeat at 7 to 10 day spray intervals.	
Ants, Including Imported Fire Ants & Harvester Ants*	3/4 lb. (12 oz.)	Repeat application as necessary to maintain control.	

SOIL MOUND DRENCHES

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP	APPLICATION INSTRUCTIONS	RESTRICTIONS
Ants, Including Imported Fire Ants & Harvester Ants*	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 four (4) foot diameter circle around the mound. Repeat application as necessary to maintain control.	Do not graze treated areas. Do not harvest citrus for one year after treatment. *Not registered in California for control of Harvester Ants

USE DIRECTIONS FOR NON-CROP AREAS

FIELD BORDERS, FENCEROWS, ROADSIDES, DITCHBANKS, AND BORROW PITS

Ground Application: Apply in 10 to 20 gallons per acre by conventional ground equipment to ensure thorough coverage.

Aerial Application: Make aerial applications in minimum of 1 to 5 gallons per acre (minimum 5 gallons/A in CA). Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Grasshoppers	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.	Do not graze or feed vegetation cut from treated areas.

WASTELAND

Ground Application: Apply in 10 to 20 gallons per acre by conventional ground equipment to ensure thorough coverage.

Aerial Application: Make aerial applications in minimum of 1/2 gallon per acre (minimum 5 gallons/acre in CA). Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Black Grass Bugs Grasshoppers 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.	Do not make more than one application per season. Do not graze or feed vegetation cut from treated areas.

USE DIRECTIONS FOR FOLIAR APPLICATIONS TO PEANUTS

Ground Application: Apply in 10 to 50 gallons per acre by conventional ground equipment to ensure thorough coverage.

Aerial Application: Make aerial applications in 5 to 10 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Grasshoppers	1/4 to 1/2 lb. (4 to 8 oz.)	Apply when eggs or insects first appear. Repeat application as necessary to maintain control*. Acephate 97UP 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.	*Do not apply more than 4 1/8 lbs./A (4 lbs. ai) per season. Allow at least 14 days to elapse between final application and digging or lifting of peanuts. Do not feed treated forage or hay to livestock. Do not allow animals to graze on treated areas.
Thrips	3/8 to 3/4 lb. (6 to 12 oz.)	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 five 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. If there is any separation which cannot be readily remixed, the combination should not be used. Combinations should be kept agitated and should be applied immediately. Do not allow combinations to set 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.)		

USE DIRECTIONS FOR FOLIAR APPLICATIONS TO PEPPERMINT AND SPEARMINT

Ground Application: Apply in 20 to 100 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.

Aerial Application: Make aerial applications in minimum of 5 to 10 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Alfalfa Looper Aphids Cutworms	1.0 lb. (16 oz.)	Apply when eggs or insects first appear. Make one repeat application, if necessary, to maintain control*.	*Do not apply more than 2 1/8 lbs./A (2 lbs. ai) per season. Allow at least 14 days to elapse between final application and harvest. Do not graze treated areas.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Strawberry Root Weevil Adult Black Vine Weevil Adult	1.0 lb. (16 oz.)	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. Two applications 10 to 14 days apart may be necessary to reduce heavy infestations.	*Do not apply more than 2 1/8 lbs./A (2 lbs. ai) per season. Allow at least 14 days to elapse between final application and harvest. Do not graze treated areas.

USE DIRECTIONS FOR FOLIAR APPLICATIONS TO PEPPERS

BELL

Ground Application: Apply in 25 to 150 gallons per acre by conventional ground equipment to ensure thorough coverage.

Aerial Application: Make aerial applications in minimum of 3 gallons per acre (minimum of 5 gal/A in CA). Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Grasshoppers	1/4 to 1/2 lb. (4 to 8 oz.)	Apply when eggs or insects first appear.	*Do not apply more than 2 1/8 lbs./A (2 lbs. ai) per season.
Cabbage Looper Green Peach Aphid Tobacco Hornworm	1/2 to 1.0 lb. (8 to 16 oz.)	Repeat as necessary to maintain insect-pest populations below economically damaging numbers*.	Allow at least 7 days to elapse between final application and harvest.
European Corn Borer	3/4 to 1.0 lb. (12 to 16 oz.)		

NON-BELL (For use only in Midwestern states, Eastern states, and Puerto Rico)

Ground Application: Apply in 40 to 150 gallons per acre by conventional ground equipment to ensure thorough coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Aphids	1/2 lb. (8 oz.)	Repeat at 7 to 10 day spray intervals as necessary*.	*Do not apply more than 1.0 lb./A (1.0 lb. ai) per season. Allow at least 7 days to elapse between final application and harvest.

USE DIRECTIONS FOR TOBACCO

TOBACCO TRANSPLANT WATER APPLICATION (EXCEPT CA)

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cutworms 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 aphids, tobacco aphids and cutworms for approximately 3 to 4 weeks after transplanting. For later season control of these insects, apply a foliar spray of Acephate 97UP. Apply in a minimum of 100 gals. of transplant water per acre. Acephate 97UP should be pre-mixed in water to form a slurry solution prior to adding to the transplant water tank.	Do not apply more than 4 1/8 lbs./A (4 lbs. ai) per season. This includes the use of Acephate 97UP in transplant water, plant bed, soil, float bed (greenhouse), and foliar applications. Do not apply more than 3/4 lb. Acephate 97UP per acre as a transplant water application as some phytotoxicity may occur.

TOBACCO FOLIAR APPLICATION (EXCEPT CA)

Ground Application: Apply in 10 to 50 gallons per acre by conventional ground equipment to ensure thorough coverage.

Aerial Application: Make aerial applications in minimum of 3 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Grasshoppers	1/4 to 1/2 lb. (4 to 8 oz.)	Apply on a 7-day schedule or as needed*.	*Do not apply more than 4 1/8 lbs./A (4 lbs. ai) per season. This includes the use of Acephate 97UP in transplant water, plant bed, soil, float bed (greenhouse), and foliar applications. Allow at least 3 days to elapse between final application and harvest.
Green Peach Aphid Flea Beetle Hornworm Tobacco Thrips	1/2 lb. (8 oz.)		
Stink bugs 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 PLANT BED APPLICATION (EXCEPT CA)

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cutworm Flea Beetle Green Peach Aphid Tobacco Aphid	3/4 lb. (12 oz.)	Apply to foliage at the equivalent of 3/4 tablespoon in 1 gal. of water per every 1,000 sq. ft. of bed. Apply evenly to ensure thorough coverage.	Do not apply more than 4 1/8 lbs./A (4 lbs. ai) per season. This includes the use of Acephate 97UP in transplant water, plant bed, soil, float bed (greenhouse), and foliar applications.

TOBACCO GREENHOUSE (FLOATBED) APPLICATION (EXCEPT CA)

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cutworm Flea Beetle Green Peach Aphid Tobacco Aphid	3/4 lb. (12 oz.)	Apply to foliage at the equivalent of 3/4 tablespoon in 3 gals. water per every 1,000 sq. ft. of bed. Apply evenly to ensure thorough coverage.	Do not apply more than 4 1/8 lbs./A (4 lbs. ai) per season. This includes the use of Acephate 97UP in transplant water, plant bed, soil, float bed (greenhouse), and foliar applications. Floatbed water should be disposed of in the transplanted field in either transplant water or foliar spray.

TOBACCO SOIL MOUND DRENCH APPLICATION (EXCEPT CA)

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP	APPLICATION INSTRUCTIONS	RESTRICTIONS
Ants, Including Imported Fire Ant & Harvester Ant	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 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.	Do not apply more than 4 1/8 lbs./A (4 lbs. ai) per season. This includes the use of Acephate 97UP in transplant water, plant bed, soil, float bed (greenhouse), and foliar applications. Allow at least 3 days to elapse between final application and harvest. Treat maximum of 13 mounds per acre. Do not treat more than once per season.

SPECIALTY USES

CROP TOLERANCE

Acephate 97UP Insecticide is generally not phytotoxic to most greenhouse or field grown plants or turf. However, it is impossible to test all plant varieties and cultural conditions. Before treating large plantings, apply to a representative group of plants and observe for two weeks to assure that a particular variety grown under current conditions is not sensitive to Acephate 97UP. Use on turfgrass is limited to sod farms and golf courses, except when applying by mound or spot treatment for fire ant and harvester ant control.

The following have been found to be sensitive to Acephate 97UP:

Trees: Balm of Gilead, Cottonwood, Lombardy Poplar or Viburnum sp. and Crabapple varieties, Ichonoski, Malus floribunda, Pink Perfection, Red Wine and Snow Cloud.

Plants: Bletchum gibbum, Cissus antarctica, Ficus triangularis, Fittonia verschaaffeltii, Maranta leuconeura kerchoveana, Pachystachya lutea, Plecranthus australis, Polypodium aureus, Polystichum, Pteris ensiformis, Tolmiea menziesii.

Chrysanthemum Varieties: Albatross, Bonnie Jean, Dixie, Garland, Gem, Iceberg, Pride, Showoff, Statesman, Tally Ho, Westward Ho and Wild Honey. Do not apply to Chrysanthemums and Roses with open flowers.

SPECIALTY USES

SMALL SPRAY EQUIPMENT

PREPARATION OF ACEPHATE 97UP SPRAY MIX USING A 16 OUNCE MEASURING CUP		
LABEL RECOMMENDATION PER ACRE IN 100 GALLONS WATER	EQUIVALENT PER ACRE IN 25 GALLONS WATER	EQUIVALENT PER ACRE IN 1 GALLON WATER (TEASPOONS/GAL)
0.25 lb.	1 oz.	1/3 tsp.
0.50 lb.	2 oz.	2/3 tsp.
0.60 lb.	2.4 oz.	0.8 tsp.
0.75 lb.	3 oz.	1 tsp.
1.00 lb.	4 oz.	1 1/3 tsp.

NON-BEARING CITRUS

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION TIMING	APPLICATION INSTRUCTIONS	USE PRECAUTIONS
Non-bearing citrus (including citrus nursery seedlings)	Aphids Grasshoppers Katydid Mealybugs Orange-dogs Plant bugs (Lygus) Thrips Whiteflies	1/2 lb. (8 oz.)	Apply as needed for control of existing populations.	Apply in 100 to 200 gals. of water per acre. 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.	Do not allow livestock to graze treated areas. Do not harvest citrus for one year after treatment.
	Citrus Blackfly	1/2 to 3/4 lb. (8 to 12 oz.)	Begin applications when eggs or adults first appear. Apply on a 7 to 10 day interval or as needed to maintain control. The high rate should be used when a heavy infestation of Citrus Blackfly is present. Begin applications when eggs or adults first appear.		
	Ants (including Imported Fire Ants and Harvester Ants)	Foliar spray 3/4 lb. (12 oz.) Mound Treatment – Drench Method	Apply as needed for control of existing populations. 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 four (4) foot diameter circle around the mound.		

**NURSERY STOCK:
NON-BEARING DECIDUOUS FRUIT TREES, NUT TREES
AND VINES IN NURSERY FIELD OR NON-BEARING ORCHARDS**

Ground Application: Apply in 50 to 100 gals. of water per acre in conventional equipment to ensure thorough coverage of the target plants.

Aerial Application: Apply in a minimum of 5 gals. of water per acre. Use sufficient carrier volume to provide thorough coverage.

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALS	APPLICATION TIMING	USE PRECAUTIONS
Nursery stock (non-bearing Deciduous Fruit Trees, Nut Trees, Vines) Almond Apricot Apple Cherry Grape Kiwi Pear Pistachio Plum Prune Walnut	Aphids Plant bugs (Lygus) Thrips	1/2 to 1 lb. (8 to 16 oz.)	Apply as needed for control of existing populations.	For application only to non-bearing trees and vines in nursery fields or in non-bearing orchards. Do not apply to interplants or single trees in a bearing orchard. Do not harvest any fruit from sprayed trees for one year after application. Do not allow livestock to graze treated area.

SPECIALTY USES — NON CROP AREAS

NON-CROP AREAS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALS	USE PRECAUTIONS
Field borders, Fencerows, Roadsides, Ditchbanks, and Borrow pits	Grasshoppers	1/4 lb. (4 oz.)	For early to mid-season application to grasshoppers in field borders, fencerows, 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.
	Ants (including Imported Fire Ants and Harvester Ants)	Mound Treatment – 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 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 locations of the ants deep within the nest. Grass in the treated area may be injured. Do not treat mound more than once per season.

**CONTAINER GROWN NURSERY STOCK,
ORNAMENTAL TREES, AND SHRUBS**

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	USE PRECAUTIONS
Container Grown Nursery Stock (Arbovitae Azalea Camellia Rhododendron Roses Viburnum Yew)	Black Vine Weevil Strawberry Root Weevil	0.75 lb. (12 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 Acephate 97UP spray per 100 gallons of solution so as to thoroughly drench the root system.	
	Ants, including Imported Fire Ants and Harvester Ants	0.75 lb. (12 oz.)	Apply as needed to control the pest.		
Trees & Shrubs (except Flowering Crabapple—see below)	Aphids Bagworms Birch Leafminer Lace Bugs Leafrollers Tent Caterpillar*	0.25 lb. (4 oz.)	As the insects begin to appear.	Apply the specified amount of Acephate 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray. * Mist Blower Application: Adjust rates to 1.0 lb. per 100 gallons of water for Gypsy Moth control and 0.75 lb. per 100 gallons of water for Tent Caterpillar control. The addition of a suitable sticker improves control of Gypsy Moth larvae.	Do not apply more often than 3 times in a growing season to trees and shrubs at a 4 week interval. Refer to Crop Tolerance statement.
	Douglas Fir Tussock Moth Larvae Gypsy Moth Larvae* Webworms	0.50 lb. (8 oz.)	As the insects begin to appear.		
	Scales (crawlers)	0.50 lb. (8 oz.)	As crawlers begin to appear. Repeat applications at a 2 week or more interval may be necessary where there is continuous crawler production.		
	Ponderosa Pine Needle Miner	0.50 lb. (8 oz.)	Time of application is important. Consult your Farm Advisor or County Extension Agent.		
	Grasshoppers	0.50 lb. (8 oz.)	As the grasshoppers begin to appear.		
	California Oakworm Cankeworms (Spring & Fall)	0.25 to 0.5 lb. (4 to 8 oz.)	As the insects begin to appear. Use the higher amount when larger larvae are present.		
	Nantucket Pine Tip Moth Larvae	0.75 lb. (12 oz.)	Time of application is important. Consult your Farm Advisor or County Extension Agent. Repeat applications will be required for subsequent generations.	Apply the specified amount of Acephate 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray.	

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PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	USE PRECAUTIONS
Trees & Shrubs (except Flowering Crabapple—see below) <i>(continued)</i>	Root Weevil Adults	0.75 lb. (12 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 Acephate 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray.	Do not apply more often than 3 times in a growing season to trees and shrubs at a 4 week interval. Refer to Crop Tolerance statement.
	Box Elder Bugs Budworms Leafhoppers Sawflies	0.75 lb. (12 oz.)	As the insects begin to appear.		
	Japanese Beetle	1.0 lb. (16 oz.)	As the Japanese Beetles begin to appear. Repeat applications at 2 week intervals may be necessary.		
	Elm Leaf Beetle (larvae)	1.0 lb. (16 oz.)	As the larvae begin to appear. Acephate 97UP will not prevent Elm Leaf Beetle eggs from hatching.		
Douglas Fir (Christmas Trees)	Douglas Fir Needle Midge	0.50 lbs. (8 oz.) (1/2 lb. per acre)	Applications should be made no more than 2 weeks prior to bud burst. For additional pest management information, consult your County Extension Agent.	Apply the specified amount of Acephate 97UP in not less than 2 gallons of spray per acre by air or in 100 gallons of spray per acre by ground.	
Flowering Crabapple	Aphids Leafrollers Tent Caterpillars	0.25 lb. (4 oz.)	As the insects begin to appear.	Apply the specified amount of Acephate 97UP in 100 gallons of water with a hydraulic sprayer.	Do not apply more often than 3 times in a growing season at a 4 week interval. Phytotoxicity has occurred on the following Crabapple varieties: Hops, Ichonoski, Malus floribunda, Pink Perfection, Red Wine and Snow Cloud.
Crape Myrtle	Aphids	2 to 3 level Tsp. (0.6 to 0.8 oz.) per Tbsp. Water as paint on	As aphids begin to appear.	Make a paint-on-slurry by mixing the specified amount of Acephate 97UP with 1 tablespoon of water. Remove the loose bark from the trunk areas to be treated. Completely paint a band around each trunk to a width twice its diameter. Application should be made to trunks within a zone 6 to 12	

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PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	USE PRECAUTIONS
Crape Myrtle (continued)	Aphids	2 to 3 level Tsp. (0.6 to 0.8 oz.) per Tbsp. Water as paint on	As aphids begin to appear.	inches above the ground and below the point where branching begins. For multi-trunk plants, be certain to treat all trunks. For either single or multi-trunk plants, application should be made as low as possible within the recommended treatment zone.	

OUTDOOR FLORAL CROPS AND GROUND COVERS

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	USE PRECAUTIONS
Chrysanthemums Daisies Dahlias Easter Lily Gladioli Gypsophila Pachysandra Peony Roses Sedum Statice Strawflower Yarrow Zinnia	Aphids Lygus Thrips	0.50 lbs. (8 oz.)	As insects begin to appear. Repeat applications may be necessary.	Apply the specified amount of Acephate 97UP in 100 gallons of 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.
Boston Ivy Roses	Japanese Beetle	1 lb. (16 oz.)	As the Japanese Beetle begin to appear. Repeat applications at 2 week intervals may be necessary.		

GREENHOUSE FLORAL AND FOLIAGE PLANT CROPS

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.

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	USE PRECAUTIONS
Roses	Leafrollers	0.50 to 0.75 lb. (8 to 12 oz.)	As leafrollers begin to appear. Use the higher amount when large larvae are present.	Apply the specified amount of Acephate 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray.	Do not apply to open flowers.
Foliage Plants Anthuriums Cacti Orchids Poinsettia	Aphids	0.25 lb. (4 oz.)	As aphids begin to appear.	Apply the specified amount of Acephate 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray. The	Phytotoxicity has occurred on the following plants: Bletchum gibbum, Cissus antartica, Ficus triangularis,

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PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	USE PRECAUTIONS
Foliage Plants Anthuriums Cacti Orchids Poinsettia (continued)	Aphids	0.25 lb. (4 oz.)	As aphids begin to appear.	addition of a wetting agent may be required on difficult to wet foliage.	Fittonia vershaffeltii, Maranta leuconeura kerchoviana, Pachystachya lutea,
	Mealybugs Thrips Whiteflies	0.50 lb. (8 oz.)	As the insects begin to appear. A repeat application at a 2 week interval may be necessary for control of mealybugs and whiteflies.		Plectranthus australis, Polypodium aureus, Polstichum, Pteris ensiformis, Tolmiea menziesii.
	Scales (Crawlers)	0.50 lb. (8 oz.)	As crawlers begin to appear. Repeat applications at a 2 week or more interval may be necessary where there is continuous crawler production.		Before treating large plantings, spray only a few plants and observe 2 weeks for varietal phytotoxicity. Application to poinsettias after bract formation may result in phytotoxicity on certain varieties.
	Sweet-potato/ Silverleaf Whiteflies (except CA)	0.25 lb. (4 oz.) + TAME® 2.4EC 10 2/3 fl. oz. (0.2 lb./A)	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 gallons. See the TAME® label for instructions.	Apply the specified amount of Acephate 97UP 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 Acephate 97UP and TAME® alone and the rotation instruction to avoid potential resistance.	
Carnations Chrysanthemums Roses	Aphids Thrips	0.50 lb. (8 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 Acephate 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray.	Do not apply more often than once every 28 days. Phytotoxicity has occurred on the following Chrysanthemum varieties: Albatross, Bonnie Jean, Dixie, Garland, Gent, Iceberg Pride, Showoff, Statesman, Tally-Ho, Westward-Ho & Wild Honey. Before treating large Chrysanthemum plantings, spray only a

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PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	USE PRECAUTIONS
Carnations Chrysanthemums Roses (continued)	Aphids Thrips	0.50 lb. (8 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 Acephate 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray.	few plants and observe two weeks for varietal phytotoxicity. Do not apply to Chrysanthemums and roses with open flowers.

COMMERCIAL TURFGRASS: GOLF COURSES AND SOD FARMS ONLY

Do not allow livestock to graze treated areas. Do not feed treated grass to livestock. Use is limited to sod farms and golf courses, except when applying by mound or spot treatment for fire ant and harvester ant control.

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 1000 SQ. FT.	APPLICATION TIMING	APPLICATION INSTRUCTIONS	
Turfgrass (Golf courses and Sod Farms only)	Fall Armyworm Yellow Striped Armyworm Southern Armyworm	0.4 to 0.90 oz. (1 to 2.5 lbs. per acre)	As the insects appear. A repeat application at 2 week intervals may be necessary.	Apply the specified amount of Acephate 97UP per 1,000 sq. ft. Use a minimum of 5 gallons of water per 1,000 sq. ft. to obtain good coverage.	
	Cutworm	0.90 to 1.8 oz. (2.5 to 5 lbs. per acre)			
	Chinch Bugs	0.90 to 1.8 oz. (2.5 to 5 lbs. per acre)	Apply as needed for adult population knockdown (10 to 14 days).		
	Fleas	0.90 to 1.8 oz. (2.5 to 5 lbs. per acre)	Apply as needed for knockdown (7 to 10 days) only on existing adult populations.		
	Leaf-hopper	0.75 oz. (2 lbs. per acre)	As the leafhoppers begin to appear. A repeat application at 1 week intervals may be necessary.		
	Mole Crickets (except CA) Spittlebug (except CA)	0.8 to 1.4 oz. (2 to 4 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 Acephate 97UP per 1,000 sq. ft. Use 1 to 15 gallons of water per 1,000 sq. ft. to obtain good coverage. Apply during late afternoon or early evening hours and after irrigation. Do not irrigate after application. The use of a lemon fragrance substance in the spray mix may enhance control by acting as a flushing agent and thus provide increased mole cricket contact with the acephate. The following lemon-scented products have been shown to be effective flushing agents: Lemon Joy, Lemon Palmolive, and Mighty Products manufactured-base pure lemon fragrance. The use rate for these lemon-scented products is 2 teaspoons per gallon of water for small total mix volume or 6 fl. oz. per 50 gallons of water for large mix volume.

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PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 1000 SQ. FT.	APPLICATION TIMING	APPLICATION INSTRUCTIONS
Turfgrass (Golf courses and Sod Farms only) (continued)	Sod Webworm (Crambus spp.)	0.4 to 0.8 oz. (1 to 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 needed. Do not repeat at more than 1 week intervals.	Apply the specified amount of Acephate 97UP per 1,000 sq. ft. Use 1 to 15 gallons of water per 1,000 sq. ft. to obtain good coverage.
	Greenbug (Shizaphis graminum) Grasshoppers	0.4 oz. (1.0 lb. per acre)	Apply when insects or their damage first appear. Repeat as necessary. Application is not to be repeated at more than 1 week intervals.	
	Black Turfgrass Ataenius (except CA)	0.9 to 1.4 oz. (3.1 to 3.9 lbs. per acre)	Apply when insects or their damage first appear.	
Dichondra (Golf courses and Sod Farms only)	Cutworm Flea Beetle Southern Armyworm Yellow Striped Armyworm	0.8 to 1.4 oz. (2 to 3.9 lbs. per acre)	As the insects appear. Repeat at 2 week intervals as necessary.	Apply the specified amount of Acephate 97UP per 1,000 sq. ft. Use a minimum of 15 gallons of water per 1,000 sq. ft. to obtain good coverage.

MOUND TREATMENT OF FIRE ANTS IN TURFGRASS

Do not allow livestock to graze treated areas. Do not feed treated grass to livestock.

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP	APPLICATION TIMING	APPLICATION INSTRUCTIONS
Turfgrass and Non-Crop Areas	Imported Fire Ants	Mound Treatment - Drench Method: Mix 0.75 oz. in 5 gallons of water. Apply 1 gallon 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 Acephate 97UP as directed. Grass in treated areas may be injured. Do not treat mound more than once per season.

OUTDOOR AND PERIMETER SPRAY EXCLUDING RESIDENTIAL TURF

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER GALLON	APPLICATION TIMING	APPLICATION INSTRUCTIONS
Outdoor and Perimeter area (excluding residential turf)	Wasps	1.2 oz.	Treat early or late in the day, as wasps are generally less active during these times.	Apply the specified amount of Acephate 97UP per each gallon of water used. Apply as a spot treatment to the nest, nest entrance and surrounding areas where the wasps alight.

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PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER GALLON	APPLICATION TIMING	APPLICATION INSTRUCTIONS
Outdoor and Perimeter area (excluding residential turf) (continued)	Ants (including Imported Fire Ants) Crickets Cockroaches Earwigs Pillbugs	1.2 oz.	As the insects appear.	Apply the specified amount of Acephate 97UP 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, entry-ways, screens, eaves, patios, garages, carports, around garbage areas where these pests congregate.

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 product into food or drink containers. Store in a cool, dry place. Protect from excessive heat. Do not contaminate food or foodstuffs. Do not store or transport near feed or food.

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.

CONDITIONS OF SALE AND WARRANTY

United Phosphorus, Inc. warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. **UNITED PHOSPHORUS, INC. MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. Handling, storage and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller.** Risks such as crop injury, ineffectiveness or other unintended consequences resulting from but not limited to weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property or failure to follow label directions will be assumed by the Buyer and User.

IN NO CASE WILL UNITED PHOSPHORUS, INC. OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.

AMMO® — Reg. TM of FMC Corporation for cypermethrin insecticide.
ASANA® — Reg. TM of E.I. duPont de Nemours & Co., Inc. for esfenvalerate insecticide.
BAYTHROID® — Reg. TM of Bayer Crop Protection for cyfluthrin synthetic pyrethroid.
CAPTURE® — Reg. TM of FMC Corporation for bifenthrin insecticide-miticide.
DANITOL® — Reg. TM of Valent USA Corporation for fenpropathrin insecticide-miticide.
KARATE® — Reg. TM of Syngenta Crop Protection, Inc. for lambda-cyhalothrin insecticide.
LORSBAN® — Reg. TM of Dow Agro Sciences for chlorpyrifos insecticide.
SCOUT® — Reg. TM of Aventis Crop Science for tralomethrin pyrethroid insecticide.
TAME® — Reg. TM of Valent USA Corporation for fenpropathrin insecticide.

EPA APPROVED 10-02

Rev. 2/03

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SPECIMEN LABEL

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