

70506-76

01/29/2013

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



JAN 29 2013

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Sherry Hutcheson  
United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

Dear Ms. Hutcheson:

Subject: Amendment to add succulent green beans grown for seed only per revised PRD  
mitigation letter dated 10/5/12  
Acephate 90 DF Insecticide  
EPA Reg. No. 70506-76  
Your submission dated: 10/17/2012

The labeling referred to above submitted in connection with the Federal Insecticide,  
Fungicide and Rodenticide Act, as amended is **acceptable**.

If you have any questions regarding this label, please contact Autumn Metzger at (703)  
305-5314 or [metzger.autumn@epa.gov](mailto:metzger.autumn@epa.gov).

Regards,

A handwritten signature in black ink that reads "Venus Eagle".

Venus Eagle, PM 01  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

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ACCEPTED  
JAN 29 2013

Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for the  
pesticide registered under:

Acephate 90 DF  
Label amendment draft – clean copy  
January 28, 2013

GROUP 1 INSECTICIDE

EPA. Reg. No. 70506-76

# ACEPHATE 90 DF Insecticide

ACTIVE INGREDIENT	By Wt.
Acephate (O, S-Dimethyl acetylphosphoramidothioate)	90%
OTHER INGREDIENTS	10%
TOTAL	100%

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

FIRST AID	
Contains an organophosphate that inhibits cholinesterase.	
If swallowed	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
If in eyes	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If on skin or clothing	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If inhaled	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment, contact the Rocky Mountain Poison Control Center at 1-866-673-6671.	
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 Assistance (Spill, Leak, Fire or Accident), Call CHEMTREC  
1-800-424-9300

EPA Reg. No. 70506-76

Manufactured for:  
United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406  
1-800-438-6071

EPA Est. No.

Batch/Lot # \_\_\_\_\_

Net Contents: \_\_\_\_\_ lbs.

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## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Harmful if absorbed through skin or swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray mist. Wash hands thoroughly after handling.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

Applicators, mixers, loaders and other handlers must wear:

- long-sleeved shirt and long pants
- chemical resistant gloves made of any water-proof material such as polyethylene or polyvinyl chloride for all mixers and loaders, and for applicators using hand-held application equipment
- shoes and 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 approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P, or HE filter.

See Engineering Controls for additional information.

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

#### 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.

#### USER SAFETY RECOMMENDATIONS

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.

Exposed treated seed may be hazardous to birds and other wildlife. Dispose of all excess treated seed and seed packaging by burial away from bodies of water. Cover or soil-incorporate spills.

This product is 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 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.

Restrictions for all uses:

- Not for indoor residential use.
- Do not apply with low pressure hand wand except for control of fire ants as a mound treatment and on ornamental trees, shrubs, and floral plants grown for non-commercial use.
- For greenhouse use, use is limited to commercial greenhouses for use on ornamental, floral, and foliage plants; and on tobacco as a floatbed application.
- For use on turf, use is limited to sod farm and golf course turf except when applying as a mound or spot treatment for fire and harvester ant control.
- Application of ACEPHATE 90 DF Insecticide to maintain control must be repeated only as directed.

### 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 until 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
- shoes plus socks.

### 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 treated areas until sprays have dried.

## ADDITIONAL INFORMATION

ACEPHATE 90 DF is an insecticide which controls a wide range of important listed pests in selected crops and in non-crop areas. The active ingredient 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 90 DF through ingestion than by contact.

[For Ornamental labels only: It is impossible to field test this product in every locale where product is sold or in all the combinations created by differences such as soil or media type, pH, and other environmental conditions such as temperature, lighting or degree days, or horticultural practices including planting dates, control of other pests, manner of use and application of this product. It is equally impossible to field test this product on the large number of existing ornamental varieties and cultivars or newly introduced variants. Test the compatibility of ACEPHATE 90 DF with the variety or cultivar of the listed ornamental crops under your specific conditions. Test ACEPHATE 90 DF on a limited scale and observe for phytotoxicity over two weeks before making large scale applications.]

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

#### **TANK MIXES**

Tank mixing of this product with any other product which is not specifically and expressly authorized by the label shall be exclusive risk of the user, applicator, and/or application advisor. Read the entire label of each product and follow the most restrictive applications and restrictions to be used in the tank mix with this product.

#### **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.

#### **SPRAY DRIFT MANAGEMENT**

A variety of factors including weather conditions, (e.g., wind direction, 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. Do not allow this product to drift.

Observe the following precautions to minimize drift:

- 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 volume (ULV) spray except as specified in the instructions for use on non-crop wasteland. Do not apply in any carrier other than water.
- 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.
- 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).
- The spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices.
- The minimum 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.

#### **For Airblast Applications:**

- Direct spray above foliage and turn off outward pointing nozzles at row ends and outer rows.

#### **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 90 DF 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 90 DF Insecticide has completely dissolved. ACEPHATE 90 DF 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. Only adjuvants approved for the intended use may be used.

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**FIRE ANT AND HARVESTER ANT CONTROL**

Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.

**TABLE OF EQUIVALENTS**

<b>AMOUNT OF ACEPHATE 90 DF PER ACRE</b>	<b>ACRES TREATED BY A 5 LB. PACKAGE</b>	<b>ACRES TREATED BY A 10 LB. PACKAGE</b>	<b>ACRES TREATED BY A 20 LB. PACKAGE</b>
2.5 oz.	32	64	128
3.2 oz.	25	50	100
3.25 oz.	24.6	49.2	98.4
0.25 lb.	20	40	80
0.28 lb.	17.8	35.7	71.4
0.5 lb.	10	20	40
0.56 lb.	8.9	17.8	35.6
0.8 lb.	6.25	12.5	25
1.0 lb.	5	10	20
1.1 lb.	4.5	9.1	18.2

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**CROP USE DIRECTIONS**

**COTTON IN-FURROW TREATMENT**

PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
<p>Aphids*</p> <p>Thrips (including Western Flower thrips)</p> <p>Black (Greasy) Cutworm (Except CA)</p> <p>* Excluding Cotton Aphids in AZ &amp; CA</p>	<p>0.56 to 1.1 lbs. (8.9 to 17.6 oz.)</p> <p>For the Blacklands of Texas use 1.1 lbs./A (17.6 oz.)</p> <p>ACEPHATE 90 DF</p>	<p>Apply ACEPHATE 90 DF in 3 to 5 gals. of water per acre as an in-furrow spray. Use flat-fan nozzles for this application, and align nozzles to ensure good spray deposition into the seed furrow. Cone type nozzles may not provide a spray pattern that ensures maximum spray deposition in the seed furrow, and should be avoided.</p> <p>Spray systems that employ metal or plastic tubing for delivery of spray solution into the seed furrow should have tubing securely fastened to the furrow opener and should be checked frequently to insure that the tubing is properly positioned to deposit spray solution into the seed furrow.</p> <p>ACEPHATE 90 DF can be mixed with fungicides that are sprayed in-furrow for disease control.</p>	<p>Do not use treated seed for food or feed purposes or process for oil.</p> <p>Do not apply more than 4.4 lbs./A of ACEPHATE 90 DF (4.0 lbs. a.i./A) per crop cycle. This includes all uses of acephate in commercial seed-treatment, in-furrow spray, and foliar applications.</p> <p>PHI = NA</p>

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Acephate 90 DF  
Label amendment draft – clean copy  
January 28, 2013

**COMMERCIALLY TREATED COTTONSEED**  
**--FOR USE BY COMMERCIAL SEED TREATERS ONLY--**

PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER 100 LBS. COTTONSEED	EFFECTIVENESS OF ACEPHATE 90 DF	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cotton Aphids Thrips (including Western Flower thrips)	0.30 to 0.44 lb (4.8 to 7.1 oz.)	ACEPHATE 90 DF provides effective reduction of thrips and cotton aphids for up to three weeks after planting.	<p>Apply ACEPHATE 90 DF as a separate treatment using enough water to give adequate coverage of the seed. ACEPHATE 90 DF dissolves quickly in water with a minimum of agitation.</p> <p>ACEPHATE 90 DF can be mixed in the slurry tank with most of the fungicide seed treatments commonly used.</p> <p>This formulation does not contain a dye. Compliance with the Federal Seed Act and 21 CFR Chapter 1 Section 2.5 requires that all seeds treated with this product must be colored to distinguish from and prevent subsequent inadvertent use as food for man or feed for animals.</p> <p>Treated seeds must not be used for, or mixed with food for animal feed, or processed for oil. Seeds treated with ACEPHATE 90 DF may be considered adulterated under state and federal laws if sold or shipped as food or feedstuffs. Seeds commercially treated with ACEPHATE 90 DF must be labeled as follows: "TREATED SEED: DO NOT USE FOR FOOD, FEED OR OIL."</p>	<p>Do not apply more than 4.0 lbs. a.i./A (4.4 lbs./A of ACEPHATE 90 DF) per crop cycle. This includes all uses of acephate in commercial seed-treatment, in-furrow spray, and foliar applications.</p> <p>Do not use treated seed for food or feed purposes or process for oil.</p> <p>Excess treated seed may be used for ethanol production only if (1) by products are not used for livestock feed and (2) no measurable residues of pesticide remain in ethanol by products that are used in agronomic practice.</p> <p>Store away from feeds and other foodstuffs.</p> <p>Wear long sleeved shirt long pants and chemical resistant gloves when handling treated seed.</p> <p>Dispose of seed packaging in accordance with local requirements.</p> <p>Exposed treated seed may be hazardous to birds and wildlife.</p> <p>Dispose of all excess treated seed and seed packaging by burial away from bodies of water.</p> <p>Cover or incorporate spilled treated seeds.</p> <p>Treated seeds must be planted into the soil at the depth of 1 inch or greater.</p> <p>Follow all precautions and limitations on labeling of all products used in mixtures.</p>



Black (Greasy) Cutworm	ACEPHATE 90 DF provides reduction of Black (greasy) cutworm from planting through the 3 <sup>rd</sup> to 4 <sup>th</sup> leaf stage of development.  When planting into fields where large cutworms are present, (5 <sup>th</sup> instar and larger), economic damage may occur.	Observe all precautions and limitations on labeling of all products used in mixtures.	
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**Seed Container Label Requirements:**

Seed commercially treated with ACEPHATE 90 DF must be labeled in compliance with all the requirements of the Federal Seed Act.

In addition all bags containing treated seed must be labeled or tagged with the following information:

- This seed has been treated with ACEPHATE 90 DF which contains “x” mg active ingredient (ai) per seed (to be filled in).
- Do not apply more than 4.0 lbs. a i /A per crop cycle This includes all uses of acephate such as commercial seed treatments in furrow spray and foliar applications.
- Do not use treated seed for food feed or oil production Excess treated seed may be used for ethanol production only if (1) by products are not used for livestock feed and (2) no measurable residues of pesticide remain in ethanol by products that are used in agronomic practice.
- Store away from feeds and other foodstuffs.
- Wear long sleeved shirt long pants and chemical resistant gloves when handling treated seed.
- Dispose of seed packaging in accordance with local requirements.
- Exposed treated seed may be hazardous to birds and wildlife Dispose of all excess treated seed and seed packaging by burial away from bodies of water Cover or incorporate spilled treated seeds.
- Treated seeds must be planted into the soil at the depth of 1 inch or greater.

### COTTON FOLIAR APPLICATION

PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Thrips (including Western Flower Thrips)	3.2 oz.	Apply in water at a minimum of 3 to 10 gals. spray per acre by air (minimum 5 gals per acre in CA and AZ) or 10 to 25 gals. spray per acre by ground. Use sufficient carrier volume to provide thorough, uniform coverage.	<b>Aerial application:</b> Do not apply ACEPHATE 90 DF at more than 1.1 lb/A (1.0 lb A/A) in CA and AZ and not more than 0.83 lb/A (0.75 lb A/A) in other areas of the U.S.		
Grasshoppers	0.28 – 0.56 lbs				
Plant Bugs (Lygus)	0.28 to 1.1 lbs.				
Flea hopper	0.56 to 1.1 lbs. (CA and AZ) 0.28 lb.	Apply when eggs or insects first appear. Repeat as necessary to maintain control.	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.	7	21
Cotton Aphid (excluding AZ and CA)	0.56 to 1.1 lbs.	<b>Grasshoppers</b> – Apply when eggs or insects first appear. Repeat as necessary to maintain control.			
Whitefly (excluding Sweetpotato/Silver-leaf Whitefly)		<b>Lygus</b> – Use the higher rate for Lygus adults that have migrated into cotton.			
Cutworms Stinkbugs	0.83 lb.	<b>Cotton Aphid</b> -- This insect may develop resistance to various classes of insecticides. Consult your local Agricultural Extension Service for current control recommendations.	Do not apply more than 4.0 lbs. a.i./A (4.4 lbs./A of ACEPHATE 90 DF) per crop cycle. This includes all uses of acephate in commercial seed-treatment, in-furrow spray, and foliar applications.		
Armyworms (excluding Beet Armyworm) Cabbage Looper Pink Bollworm (AZ & CA)	1.1 lbs.	<b>Pink Bollworm</b> -- Apply when insects first appear.			
Bollworm. Tobacco Budworm Adults Larvae Eggs (DEADHATCH®)	0.56 to 1.1 lbs. (East of Rockies) 1.1 lbs. (CA & AZ)	<b>Cutworms</b> -- 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. <b>Armyworms &amp; Cabbage Looper</b> -- Apply when eggs first appear. <b>Bollworm and Tobacco Budworm</b> -- Early season light infestation use 0.56 lb. per acre. Mid and late season moderate to severe infestations use 0.83 to 1.1 lbs. per acre. Apply when eggs first appear. Moths of budworm larvae are controlled when they come in direct contact with spray particles during application. Moth kill is most likely to occur when application is made late in the evenings during periods of peak activity. <b>DEADHATCH®:</b> Control of emerging larvae by consumption of treated egg casings.			

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## COTTON TANK MIXES

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### **PRODUCT USE INFORMATION:**

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.

The tank mixes listed below can be used as long as the labels of the listed products do not prohibit tank mixes.

### **RESISTANCE MANAGEMENT**

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

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PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF + TANK MIX PARTNER PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Armyworms (excluding Beet Armyworm) Bollworms Cabbage Looper Cotton Aphid Cutworms Fleahopper Grasshoppers Pink Bollworm Plant Bugs (Lygus, Mirids) Salt Marsh Caterpillar Thrips (including Western Flower thrips) Tobacco Budworm Whitefly (excluding Sweetpotato/ Silverleaf Whitefly)	0.28 to 1.1 lbs. (4.4 to 17.6 oz.) ACEPHATE 90 DF + 1 to 2 pts. CHLORPYRIFOS 4E	<p>Apply when insects first appear or when damage is first noted and repeat application as necessary to maintain control.</p> <p>User must comply with all applicable directions, restrictions, and precautions on the EPA registered label for CHLORPYRIFOS 4 E and Acephate 90 DF Insecticide. The most restrictive labeling must be followed when using a tank mix.</p> <p><b>By Ground:</b> Ground application is recommended. Apply in 10 to 25 gals. of spray per acre. Control is most effective when ground application is made in the evenings and sprays are directed toward the base and lower portion of plant.</p> <p><b>By Air:</b> Aerial applications are less effective, but may be used. Apply in 3 to 10 gals. spray per acre (minimum 5 gals spray per acre in CA).</p> <p><b>Cutworms:</b> Use 0.83 lb. per acre of ACEPHATE 90 DF.</p>	<p><b>Aerial application: Do not apply ACEPHATE 90 DF at more than 1.1 lb/A (1.0 lb AI/A) in CA and AZ and not more than 0.83 lb/A (0.75 lb AI/A) in other areas of the U.S.</b></p> <p>Do not feed gin trash or treated forage to livestock.</p> <p>Do not allow livestock to graze on treated areas.</p> <p>Do not apply more than 4.0 lbs. a.i./A (4.4 lbs./A of ACEPHATE 90 DF) per crop cycle. This includes all uses of acephate in commercial seed-treatment, in-furrow spray, and foliar applications.</p>	7	21
Sweetpotato/ Silverleaf Whitefly	0.56 to 1.1 lbs. (8.9 to 17.6 oz.) ACEPHATE 90 DF + 10 2/3 to 16 fl. oz. DANITOL® 2.4 EC	<p>Apply when insects first appear or when damage is first noted. Repeat applications may be needed to maintain control.</p> <p>Apply in water at 3 to 10 gals. spray per acre by air (minimum 5 gals per acre in CA) or 10 to 25 gals. spray per acre by ground.</p> <p>User must comply with all applicable directions, restrictions, and precautions on the EPA registered label for DANITOL® 2.4 EC Spray and Acephate 90 DF Insecticide. The most restrictive labeling must be followed when using a tank mix.</p>			

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**COTTON TANK MIXES (CONTINUED)**

PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF + TANK MIX PARTNER PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Thrips (including Western Flower Thrips) and Annual and Perennial Weeds (refer to the glyphosate label for weeds controlled)	0.2 lb. (3.23 oz.) Acephate 90 DF  plus Glyphosate (For rate, refer to the Glyphosate label)	Use on wide row or ultra narrow row Roundup Ready® cotton. Apply as a broadcast foliar spray when insects first appear. For optimum weed control, apply the glyphosate to weeds according to size indicated on the glyphosate label. Apply in 10 to 25 gals. of spray per acre.  User must comply with all applicable directions, restrictions, and precautions on the EPA registered label for glyphosate products and Acephate 90 DF Insecticide. The most restrictive labeling must be followed when using a tank mix.  Severe injury or destruction of plant will occur if the spray mixture contacts the foliage, green stems or fruit of any desirable plant or tree other than Roundup Ready cotton. Use extreme caution when applying the mixture to avoid spray drift onto desirable vegetation. Application when wind speed is less than 5 miles per hour reduces the likelihood of injury to desirable plants. Refer to the section of this label on Spray Drift Management.	For use only within the states of AL, AR, FL GA, LA, MS, OK and TN.	7	21

## COTTON TANK MIXES WITH PYRETHROIDS

### PRODUCT USE INFORMATION:

Synthetic Pyrethroids should be used within the guidelines of state and/or regional resistance management programs and recommendations. 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.

### RESISTANCE-MANAGEMENT

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

PESTS CONTROLLED	ACEPHATE 90 DF AND TANK MIX PARTNER	AMOUNT OF ACEPHATE 90 DF + TANK MIX PARTNER PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Aphids Bollworm Cabbage Looper Cotton Leaf Perforator Cutworms* Fall Armyworm Fleahoppers Pink Bollworm (AZ & CA) Plantbugs Pink Bollworm (AZ & CA) Plantbugs	ACEPHATE 90 DF + one of the following:	0.56 to 1.1 lbs. per acre + one of the following:	Begin applications when eggs or insects appear and repeat application as needed to maintain control.  <b>By Ground:</b> Ground application is recommended. Control is most effective when ground applications are made in the evenings and sprays are directed toward the base and lower portion of plant. Apply in water at	<b>Aerial application:</b> Do not apply ACEPHATE 90 DF at more than 1.1 lb/A (1.0 lb AI/A) in CA and AZ and not more than 0.83 lb/A (0.75 lb AI/A) in other areas of the U.S.  Do not feed gin trash or treated forage to livestock. Do not allow livestock to graze on treated areas.		21
Stinkbugs* Sweetpotato/Silverleaf Whitefly Thrips (including Western Flower thrips) Tobacco Budworm Whitefly	Cypermethrin 2.5 EC (such as UP-Cyde 2.5 EC or any other EPA approved cypermethrin formulation approved for use in cotton)	Refer to the Cypermethrin 2.5 EC approved label for use instructions.	10 to 25 gals. spray per acre by ground.  <b>By Air:</b> Aerial applications are less effective, but may be used. Apply in water at 3 to 10 gals. spray per acre by air (minimum 5 gals per acre in CA).	Do not apply more than 4.0 lbs. a.i./A (4.4 lbs./A of ACEPHATE 90 DF) per crop cycle. This includes all uses of acephate in commercial seed-treatment, in-furrow spray, and foliar applications	7	For use with SCOUT X-TRA, allow at least 28 days to elapse between final application and harvest
	ASANA® XL	Refer to the ASANA® XL approved label for use instructions.				
	BAYTHROID® 2 EC	Refer to the BAYTHROID® 2 EC approved label for use instructions	* Stinkbugs and Cutworms: Use 0.83 lb. per acre of ACEPHATE 90 DF.			

**COTTON TANK MIXES WITH PYRETHROIDS (CONTINUED)**

PESTS CONTROLLED	ACEPHATE 90 DF AND TANK MIX PARTNER	AMOUNT OF ACEPHATE 90 DF + TANK MIX PARTNER PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
	Bifenthrin 2 EC (such as Bifenture EC or any other EPA approved bifenthrin formulation approved for use in cotton)	Refer to the Bifenthrin 2 EC approved label for use instructions.	Begin applications when eggs or insects appear and repeat application as needed to maintain control.  <b>By Ground:</b> Ground application is recommended. Control is most effective when ground applications are made in the evenings and sprays are directed toward the base and lower portion of plant. Apply in water at	<b>Aerial application:</b> Do not apply ACEPHATE 90 DF at more than 1.1 lb/A (1.0 lb AI/A) in CA and AZ and not more than 0.83 lb/A (0.75 lb AI/A) in other areas of the U.S.  Do not feed gin trash or treated forage to livestock. Do not allow livestock to graze on treated areas.	7	21
	Lambda-Cyhalothrin 1 EC (Except CA)	Refer to the Lambda-Cyhalothrin 1 EC approved label for use instructions.	10 to 25 gals. spray per acre by ground.  <b>By Air:</b> Aerial applications are less effective, but may be used. Apply in water at 3 to 10 gals. spray per acre by air (minimum 5 gals per acre in CA).	Do not apply more than 4.0 lbs. a.i./A (4.4 lbs./A of ACEPHATE 90 DF) per crop cycle. This includes all uses of acephate in commercial seed-treatment, in-furrow spray, and foliar applications		For use with SCOUT X-TRA, allow at least 28 days to elapse between final application and harvest
	SCOUT® X-TRA (Except CA)	Refer to the SCOUT® X-TRA approved label for use instructions.				

**BEANS AND LIMA BEANS — Dry and Succulent Forms**

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Fleahoppers Grasshoppers	0.28 to 0.56 lb. (4.4 to 8.9 oz.)	Apply when eggs or insects first appear. Use the higher listed rates for severe insect infestations.	Do not apply more than 2 lbs. a.i./A (2.2 lbs./A of ACEPHATE 90 DF) per crop cycle.	7	14 (dry beans)  1 (lima beans, succulent form)
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)	0.56 to 1.1 lbs. (8.9 to 17.6 oz.)	<b>Ground Application:</b> Apply in 20 to 100 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.  <b>Aerial Application:</b> Make applications of ACEPHATE 90 DF Insecticide in a minimum of 2 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.	Do not feed treated vines to livestock.  Use on succulent green beans as a food crop is prohibited (includes string beans, snap beans, and wax beans) Succulent green bean use is permitted ONLY if grown for seed.		
Armyworms (excluding Beet Armyworm) Corn Earworm European Corn Borer	0.83 to 1.1 lbs. (13.3 to 17.6 oz.)				
<b>Restrictions for Succulent Green Beans Grown for Seed:</b> <ul style="list-style-type: none"><li>Do not feed crop residues to livestock or allow animals to graze treated areas.</li><li>Do not apply to succulent beans grown for fresh market or processing.</li><li>No portion of the succulent bean plant may be used or distributed for food or feed purposes.</li><li>Seeds grown from succulent beans shall bear a tag or container label which forbids use of the seed for human consumption or animal feed.</li><li>Seeds grown from succulent beans may not be distributed for human consumption or animal feed.</li></ul>					



**BRUSSELS SPROUTS & CAULIFLOWER**

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Green Peach Aphid	0.56 to 1.1 lbs. (8.9 to 17.6 oz.)	<p>Apply when eggs or insects first appear. Use the higher listed rates when heavy infestations of aphids are present. Repeat application as necessary to maintain control.</p> <p><b>Ground Application:</b> Apply in 25 to 150 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.</p> <p><b>Aerial Application:</b> Make applications of ACEPHATE 90 DF Insecticide in a minimum of 5 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.</p>	<p>Do not apply more than 2 lbs. a.i./A (2.2 lbs./A of ACEPHATE 90 DF) per crop cycle.</p> <p>Do not feed trimmings to livestock or allow animals to graze in treated areas.</p>	7	14
Cabbage Looper Imported Cabbage Worm Diamondback Moth Larvae**	1.1 lbs. (17.6 oz.)	<p>**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.</p>			

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### CELERY

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Green Peach Aphid	0.56 to 1.1 lbs. (8.9 to 17.6 oz.)	Apply when eggs or insects first appear. Use the higher listed rates when heavy infestations of aphids are present. Repeat application as necessary to maintain control.	Do not apply more than 2 lbs. a.i./A (2.2 lbs./A of ACEPHATE 90 DF) per crop cycle.  All celery must be trimmed (tops removed) before shipment for use. Do not use trimmed tops for food or feed.	7	21
Cabbage Looper Fall Armyworms	1.1 lbs. (17.6 oz.)	<b>Ground Application:</b> Apply in 50 to 100 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.  <b>Aerial Application:</b> Make applications of ACEPHATE 90 DF Insecticide in a minimum of 5 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.			

### CRANBERRY

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	PREHARVEST INTERVAL, DAYS (PHI)
Cranberry Blossom Worm Cranberry Cutworm Gypsy Moth False Armyworm Fire Worms Fruit Worm Spanworms Sparganothis	1.1 lbs. (17.6 oz.)	Apply in water by air, ground or with sprinklers when insects first appear.	Limit to one application per growing season.  Do not apply more than 1.0 lb a.i./A (1.1 lb. of ACEPHATE 90 DF) per season.  Do not apply from start of bloom until all berries set.	75 (MA, NJ, WA, WI) 90 (all other states)

**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. Use a sufficient amount of water to give thorough coverage. Application of more or less than the optimal quantity 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.

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

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**HEAD LETTUCE**  
**—Crisphead Type Only—**

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Aster Leafhopper Green Peach Aphid	0.56 to 1.1 lbs. (8.9 to 17.6 oz.)	<b>Ground Application:</b> Apply in 10 to 60 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop. <b>Aerial Application:</b> Make aerial applications in minimum of 5 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.	Do not apply more than 2.0 lbs. a.i./A (2.2 lbs./A of ACEPHATE 90 DF) per crop cycle.  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.  Maximum of 5 applications per crop per season.	7	21
Armyworm (excluding Beet Armyworm) Cabbage Looper	1.1 lbs. (17.6 oz.)	Repeat application as necessary to maintain control.			

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### MINT - PEPPERMINT AND SPEARMINT

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Alfalfa Looper Aphids Cutworms	1.1 lbs. (17.6 oz.)	<p>Apply when eggs or insects first appear. Make one repeat application, if necessary, to maintain control.</p> <p><b>Ground Application:</b> Apply in 20 to 100 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.</p> <p><b>Aerial Application:</b> Make aerial applications in minimum of 5 to 10 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.</p>	<p>Do not apply more than 2.0 lbs. a.i./A (2.2 lbs./A of ACEPHATE 90 DF) per crop cycle</p> <p>Do not graze treated areas.</p> <p>Do not use spent hay for feed for dairy animals.</p> <p>Maximum of 2 applications per crop per season.</p>	7	14
Strawberry Root Weevil Adult Black Vine Weevil Adult		<p><b>Ground Application:</b> Apply in 40 to 100 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop. 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. A second application may be necessary to reduce heavy infestations.</p>		7	

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### NON-BEARING CITRUS – AGRICULTURAL SETTINGS (NEWLY PLANTED GROVES)

#### FOLIAR APPLICATIONS

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Aphids Grasshoppers Katydid Mealybugs Orangedog Plant bugs Thrips Whiteflies (except Sweetpotato & Silverleaf Whitefly)	0.56 lb. (8.9 oz.)	Apply when eggs or insects first appear. Apply as necessary to maintain control. Use the higher listed rate when a heavy infestation is present.  <b>Ground Application:</b> Apply in 100 to 200 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.  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 graze livestock in treated areas.	7	365
Citrus Blackfly*	0.56 to 0.83 lb. (8.9 to 13.3 oz.)				
Ants (excluding fire, harvester, carpenter, and pharaoh ants)	0.83 lb. (13.3 oz.)	*Not registered in CA for use to control Blackfly.			

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**SOIL MOUND DRENCHES IN NON-BEARING CITRUS ORCHARDS**

<b>PESTS CONTROLLED</b>	<b>AMOUNT OF ACEPHATE 90 DF PER ACRE</b>	<b>APPLICATION INSTRUCTIONS</b>	<b>RESTRICTIONS</b>
Ants* (except carpenter and pharaoh)	0.83 oz./ 5 gals.	Apply when insects first appear. Use 1 gal. of mix to each mound area by sprinkling the mound until it is wet. Treat a four (4) foot diameter circle around the mound. Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.	Do not graze livestock in treated areas. *Not registered in CA for use to control Harvester Ants.

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### NON-CROP AREAS

USE SITES	PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Non-Crop Areas	<p>Ants* (except carpenter and pharaoh)</p> <p>For turf grass, uses are limited to fire and harvester ants only.*</p>	<p><b>Mound Treatment — Drench Method:</b> Mix 0.83 oz. in 5 gals. of water. Apply 1 gal. of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.</p>	<p>Apply when insects first appear. Ants are most active in the early morning and late afternoon and best results are obtained when applications are made at these times.</p> <p>Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.</p>	<ul style="list-style-type: none"> <li>Do not treat mound more than once per season.</li> <li>13 mounds per season.</li> <li>Do not graze livestock or feed vegetation cut from treated areas to livestock.</li> <li>Not registered in CA for use to control Harvester Ants.</li> </ul>

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

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Grasshoppers	0.28 lb. (4.4 oz.)	<p><b>Ground Application:</b> Apply in 10 to 20 gallons per acre by conventional ground equipment to ensure thorough coverage.</p> <p><b>Aerial Application:</b> 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.</p> <p>Make applications early to mid-season.</p> <p>Use the higher volumes when spraying dense foliage.</p> <p>An approved drift retardant may be added to aid in controlling drift and reducing evaporation of aerial sprays.</p>	Do not graze livestock or feed vegetation cut from treated areas to livestock.

### WASTELAND (NON-FOOD/NON-FEED PRODUCING AREAS)

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Black Grass Bugs Grasshoppers Mormon Crickets	0.11 to 0.14 lb. (1.7 oz. to 2.2 oz.)	<p><b>Ground Application:</b> Apply in 10 to 20 gallons per acre by conventional ground equipment to ensure thorough coverage.</p> <p><b>Aerial Application:</b> Make aerial applications in minimum of ½ gallon per acre (minimum 5 gallons/acre in CA). Use sufficient carrier volume to provide thorough, uniform coverage.</p> <p>Use the higher volumes when spraying dense foliage.</p> <p>An approved drift retardant may be added to aid in controlling drift and reducing evaporation of aerial sprays.</p>	<p>Do not make more than one application per season.</p> <p>Do not graze livestock or feed vegetation cut from treated areas to livestock.</p>



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**SOUTHERN PINE SEED ORCHARDS (For use only in Florida, Georgia, North Carolina, and Virginia)**

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Slash Pine Flower Thrips	3.33 to 3.83 lbs.	Apply using high volume spray equipment to the crown of the tree to thoroughly wet the foliage. When low volume spray equipment is used, apply at 100 gal. per acre.  <b>Ground Application:</b> For high volume ground sprayers, apply using 3.83 lb Acephate 90 DF (4.0 lbs. a.i./A) as a 0.5% dilution by weight. Apply 3 to 5 gallons of this dilution per tree. If low volume spray equipment is used, use 3.33 lbs. Acephate 90 DF per acre (3.0 lbs. a.i./A) in 100 gallons of water.  <b>Aerial Application:</b> Make aerial applications using the low rate (3.33 lbs. Acephate 90 DF per acre) in no more than 10 gallons of water per acre.  For Slash Pine Flower Thrips, make the first application when female flowers are in the twig-bud stage (between stages 1 and 2). A second application may be made a minimum of 14 days before maximum flower receptivity to pollen (stage 4 flowers). For Coneworms, Coneborers, and Seedbugs, make the first application 6 days after peak pollen flight. Make one repeat application at a 4-week interval.	Do not graze livestock.  Do not harvest treated cover crops.  Do not allow contact of spray solutions with open water.  Do not apply with low pressure hand wand.  Apply no more than two applications per season.  Minimum spray interval = 14  Maximum seasonal rate = 8 lbs ai/A.
Coneworms Coneborers Seedbugs			

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PEANUTS

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Grasshoppers	0.28 to 0.56 lb. (4.4 to 8.9 oz.)	Apply when eggs or insects first appear. Repeat application as necessary to maintain control.  <b>Ground Application:</b> Apply in 10 to 50 gallons per acre by conventional ground equipment to ensure thorough coverage. <b>Aerial Application:</b> Make aerial applications in 5 to 10 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.	Do not apply more than 4.0 lbs. a.i./A (4.4 lbs./A of ACEPHATE 90 DF) per crop cycle. This includes all uses of acephate on peanuts as a foliar spray in addition to the peanut planter box seed treatment use.  Do not feed treated forage or hay to livestock or allow animals to graze on treated areas.	7	14 (from final application to digging or lifting of peanuts)
Thrips	0.42 to 0.83 lb. (6.7 to 13.3 oz.)	ACEPHATE 90 DF can be tank-mixed with registered at-cracking and early post-emergence peanut herbicides, as long as the labels of those products do not prohibit tank mixes. The most restrictive of label limitations and precautions must be observed. Do not exceed any of the label dosage rates.			
Corn Earworm Fall Armyworm Leafhoppers Loopers Velvetbean Caterpillar Three-Cornered Alfalfa Hopper	0.83 to 1.1 lbs. (13.3 to 17.6 oz.)	The physical compatibility can be tested by pouring 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. If included, add wettable powder or dry flowable formulations and disperse these first, then add liquid pesticides. If any separation is observed and it cannot be readily remixed, the combination should not be used. Tank mixes should be agitated continuously and should be applied as soon as prepared. Do not allow combinations to remain in the chemical supply tank or irrigation lines for prolonged periods.			

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## PEPPERS

### BELL PEPPERS

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Grasshoppers	0.28 to 0.56 lb. (4.4 to 8.9 oz.)	Apply when eggs or insects first appear. Repeat as necessary to maintain insect-pest populations below economically damaging numbers.	Do not apply more than 2.0 lbs. a.i./A (2.2 lbs./A of Acephate 90 DF) per crop cycle.	7	7
Cabbage Looper Green Peach Aphid Tobacco Hornworm	0.56 to 1.1 lbs. (8.9 to 17.6 oz.)	<b>Ground Application:</b> Apply in 25 to 150 gallons per acre by conventional ground equipment to ensure thorough coverage.  <b>Aerial Application:</b> 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.			
European Corn Borer	0.83 to 1.1 lbs. (13.3 to 17.6 oz.)				

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

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Aphids	0.56 lb. (8.9 oz.)	<b>Ground Application:</b> Apply in 40 to 150 gallons per acre by conventional ground equipment to ensure thorough coverage.  Repeat at 7 to 10 day spray intervals as necessary.	Do not apply more than 1.0 lb. a.i./A (1.1 lbs./A of ACEPHATE 90 DF) per crop cycle.  Maximum of 2 applications per crop per season.	7	7

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**SOYBEANS**

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Grasshopper Thrips	0.28 to 0.56 lb. (4.4 to 8.9 oz.)	Apply when eggs or insects first appear. Repeat as necessary to maintain insect-pest populations below economically damaging numbers.	Do not apply more than 1.5 lbs. a.i./A (1.67 lb./A of ACEPHATE 90 DF) per crop cycle.	7	14
Potato Leafhopper Stinkbugs	0.56 to 1.1 lbs. (8.9 to 17.6 oz.)	<b>Ground Application:</b> Apply in 10 to 50 gallons per acre by conventional ground equipment to ensure thorough coverage.	Do not graze or cut vines for hay or forage.		
Armyworms (except Beet) Bean Leaf Beetle Cabbage Looper Green Cloverworm Mexican Bean Beetle Soybean Aphid Threecornered Alfalfa Hopper Velvetbean Caterpillar	0.83 to 1.1 lbs. (13.3 to 17.6 oz.)	<b>Aerial Application:</b> Make aerial applications in 5 to 10 gallons per acre (minimum of 5 gal/A in CA). Use sufficient carrier volume to provide thorough, uniform coverage.			

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**TOBACCO – FLUE CURED, AIR CURED, DARK FIRE CURED**

**TOBACCO TRANSPLANT WATER APPLICATION (EXCLUDING CALIFORNIA)**

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cutworms Flea Beetle Green Peach Aphid Potato Tuberworm Tobacco Aphid Tobacco Thrips	0.83 lb. (13.3 oz.)	<p>ACEPHATE 90 DF provides control of early season insect pressures for approximately 3 to 4 weeks after transplanting. For later season control of these insects, apply a foliar spray of ACEPHATE 90 DF.</p> <p>Apply in a minimum of 100 gals. of transplant water per acre. ACEPHATE 90 DF can be pre-mixed in water to form a slurry solution prior to adding to the transplant water tank.</p> <p>Make transplant water applications using mechanical transplant equipment only to ensure that the insecticide/water mix is applied directly to the soil along with the transplanted plants.</p>	<p>Do not apply more than 4.0 lbs. a.i./A (4.4 lbs./A of ACEPHATE 90 DF) per crop cycle. This includes all uses of acephate including transplant water, plant bed, soil, foliar and float bed.</p> <p>Do not apply more than 0.83 lb. ACEPHATE 90 DF per acre as a transplant water application as some phytotoxicity may occur.</p>

**TOBACCO FOLIAR APPLICATION (EXCLUDING CALIFORNIA)**

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Grasshoppers	0.28 to 0.56 lb. (4.4 to 8.9 oz.)	<p><b>Ground Application:</b> Apply in 10 to 50 gallons per acre by conventional ground equipment to ensure thorough coverage.</p> <p><b>Aerial Application:</b> Make aerial applications in minimum of 3 gallons per acre. Use sufficient carrier volume to provide thorough, uniform coverage.</p>	Do not apply more than 4.0 lbs. a.i./A (4.4 lbs./A of ACEPHATE 90 DF) per crop cycle. This includes all uses of acephate including transplant water, plant bed, soil, foliar and float bed.	7	3
Green Peach Aphid Flea Beetle Tobacco Hornworm Tobacco Thrips	0.56 lb. (8.9 oz.)				
Stink bugs Tobacco Aphid Vegetable Weevils	0.56 to 0.83 lb. (8.9 to 13.2 oz.)				
Budworm Cabbage Looper Cutworm Japanese Beetle	0.83 lb. (13.2 oz.)				

**TOBACCO PLANT BED APPLICATION (EXCLUDING CALIFORNIA)**

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cutworm Flea Beetle Green Peach Aphid Tobacco Aphid	0.83 lb. (13.3 oz.)	Apply to foliage at the equivalent of 1 tablespoon in 1 gal. of water per every 1,000 sq. ft. of bed. Apply evenly to ensure thorough coverage.	<p>Do not apply more than 4.4 lbs./A (4 lbs. ai/A) per crop cycle. This includes all uses of acephate including transplant water, plant bed, soil, foliar and float bed.</p> <p>Minimum spray interval = 0.</p> <p>PHI = 0.</p>

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**GREENHOUSE (FLOATBED) APPLICATION (EXCLUDING CALIFORNIA)**

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cutworm Flea Beetle Green Peach Aphid Tobacco Aphid	0.83 lb. (13.3 oz.)	Apply to foliage at the equivalent of 1 tablespoon in 3 gals. water per every 1,000 sq. ft. of bed.  Apply evenly to ensure thorough coverage.	Do not apply more than 4.0 lbs. a.i./A (4.4 lbs./A of ACEPHATE 90 DF) per crop cycle. This includes all uses of acephate including transplant water, plant bed soil, foliar and float bed.  Dispose floatbed water in the transplanted field as either transplant water or as a foliar spray.  Minimum spray interval = 7  PHI = 3

**TOBACCO – FLUE CURED, AIR CURED, DARK FIRE CURED (CONTINUED)**

**SOIL MOUND APPLICATION (EXCLUDING CALIFORNIA)**

PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Ants (except carpenter and pharaoh)	DRENCH METHOD: Mix 0.83 oz. in 5 gals. of water.	Make applications when insects first appear.  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.  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 4.0 lbs. a.i./A (4.4 lbs./A of ACEPHATE 90 DF) per season. This includes the use of acephate 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 a maximum of 13 mounds per acre.  Do not treat more than once per season.

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## SPECIALTY USES

### CROP TOLERANCE

ACEPHATE 90 DF 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, grow under current conditions is not sensitive to ACEPHATE 90 DF.

The following have been found to be sensitive to ACEPHATE 90 DF:

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

**Plants:** Bletchum gibbum, Cissus antarctica, Ficus triangularis, Fittonia verschaffeltii, Maranta leuconeura kerchoveana, Pachystachya lutea, Plectranthus 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. Application to chrysanthemums and roses with open flowers will cause injury to the flowers.

Application to Huckleberry, Balm of Gilead, Cottonwood, Lombardy Poplar and Viburnum suspensum may cause injury to the plants.

Nursery crops. Before treating large plantings, spray only a few plants and observe two weeks for phytotoxicity.

### SMALL VOLUME SPRAY EQUIPMENT

FOR PREPARATION OF ACEPHATE 90 DF SPRAY MIX, USE A SMALL LIQUID MEASURING CUP*		
LABEL RECOMMENDATION ACEPHATE 90 DF IN 100 GALS. WATER	EQUIVALENT ACEPHATE 90 DF IN 20 GALS. WATER	EQUIVALENT ACEPHATE 90 DF IN 1 GAL. WATER (TEASPOON/GAL.)
0.28 lb. (4.4 oz.)	0.9 oz.	0.4 tsp.
0.5 lb. (8 oz.)	1.6 oz.	0.83 tsp.
0.56 lb. (8.9 oz.)	1.8	0.93
0.8 lb. (12.3 oz.)	2.5 oz.	1.25 tsp.
0.83 lb. (13.3 oz.)	2.6.	1.3
1.1 lbs. (17.7 oz.)	3.5 oz.	1.7 tsp.
* Use a 16 oz. measuring cup.		

**NON-BEARING CITRUS**  
**(including seedlings)**

PLANTS	PESTS CONTROLLED	AMOUNT OF ACEPHATE 90 DF PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Non-bearing Citrus including citrus nursery seedlings	Aphids Grasshoppers Katydid Mealybugs Orangedog Plant bugs (Lygus) Thrips Whiteflies	Foliar applications 0.56 lb. (8.9 oz.)	Apply as necessary to maintain control.  <b>Ground Application:</b> Apply in 100 to 200 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop. 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 graze livestock in treated areas.  Do not harvest citrus for one year (365 days) after treatment.
	Citrus Blackfly*	Foliar applications 0.56 to 0.83 lb. (8.9 to 13.3 oz.)	Use the higher listed rate when a heavy infestation of Citrus Blackfly is present.	*Not registered in CA for use to control Blackfly.
	Ants (excluding fire, harvester, carpenter, and pharaoh ants)	<b>Foliar applications:</b> 0.83 lb. (13.3 oz.)	Make repeat applications at a minimum of 7-day intervals. <b>Ground Application:</b> Apply in 100 to 200 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop. 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.	Ground Application Use Limited to Florida Only.
	Ants* (except carpenter and pharaoh)	<b>Mound Treatment Drench Method:</b> Mix 0.83 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.  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 use to control Harvester Ants.



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**NURSERY STOCK IN NURSERY FIELDS OR IN NON-BEARING ORCHARDS  
NON-BEARING DECIDUOUS FRUIT AND NUT TREES AND VINES**

PLANTS	PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER ACRE PER 100 GALS.	APPLICATION INSTRUCTIONS	RESTRICTIONS
Nursery Stock including Non-Bearing Deciduous Fruit and Nut Trees and Vines, including: Almond Pistachio Pecan Walnut Apple Kiwi Pear Apricot Cherry Plum Prune Grape	Aphids Plant bugs (Lygus) Thrips	0.56 to 1.1 lbs. (8.9 to 17.7 oz.)	Apply when eggs or insects first appear. Apply at a minimum of 7-14 day intervals to maintain control. <b>Ground Application:</b> Apply in 50 to 200 gallons per acre by conventional ground equipment to ensure thorough coverage of the target crop.  <b>Air Application:</b> Apply in 5 gallons of water per acre.  Apply to individual juvenile or non-bearing trees with a total application not to exceed specified rate in lbs. per acre. Residual control depends on spray coverage and the amount of moisture following application.	Do not graze livestock in treated areas.  Do not harvest any fruit or nuts from sprayed trees for one year after treatment.  Minimum spray interval = 14.  Do not apply to interplants or to single trees in bearing orchards.  Do not apply with low pressure hand wand.

**CONTAINER GROWN ORNAMENTAL NURSERY STOCK**

PLANTS	PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER ACRE PER 100 GALS.	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Arborvitae Azalea Camellia Rhododendron Roses Viburnum Yew	Black Vine Weevil Strawberry Root Weevil  Ants (excluding fire, harvester, carpenter, and pharaoh ants)	0.83 lb. (13.3 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 as needed to control the pest.	Apply the specified amount ACEPHATE 90 DF Spray per 100 gals. of solution so as to thoroughly drench the root system.	Make repeat applications at 3 day intervals for application rates at 8.9 oz. or less and at 7 day intervals for application rates greater than 8.9 oz.  Do not apply with low pressure hand wand.

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### ORNAMENTAL TREES AND SHRUBS

PLANTS	PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER ACRE PER 100 GALS.	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Trees and Shrubs (except Flowering Crabapple, see below)	Aphids Bagworms Birch Leafminer Tent Caterpillar* Lace Bugs Leafrollers	0.28 lb. (4.4 oz)	As the insects begin to appear. Make repeat applications at 3 day intervals for application rates at 8.9 oz. or less and at 7 day intervals for application rates greater than 8.9 oz.	Apply the specified amount of ACEPHATE 90 DF in 100 gals. water with a hydraulic sprayer. The addition of a suitable sticker improves control of Gypsy Moth larvae.	Do not apply by low pressure hand wand.  Minimum spray interval = 14.
	Douglas Fir Tussock Moth Larvae Gypsy Moth Larvae* Webworms	0.56 lb. (8.9 oz.)	As the insects begin to appear. Make repeat applications at 3 day intervals for application rates at 8.9 oz. or less and at 7 day intervals for application rates greater than 8.9 oz.	Application to Huckleberry, Balm of Gilead, Cottonwood, Lombardy Poplar and Viburnum suspensum may cause injury to the plants.  Nursery crops: Before treating large plantings, spray only a few plants and observe two weeks for phytotoxicity.	Do not apply > 1 lb. ai per 100 gal of water per application.
	Scales (Crawlers)		As crawlers begin to appear. Repeat applications, at a 2 week or more interval, may be necessary where there is continuous crawler infestation.	*Use a mist blower application. Adjust rates to 1.1 lbs. per 100 gals. water for Gypsy Moth control and 0.83 lb. per 100 gals. water for Tent Caterpillar control.	
	Ponderosa Pine Needle Miner	0.56 lb. (8.9 oz.)	Time of application is important. Consult your Farm Advisor or County Extension Agent.	Apply the specified amount of ACEPHATE 90 DF in 100 gals. Water with a hydraulic sprayer to ensure a full coverage spray. Except where noted, make repeat applications at a minimum of 14 day spray interval.	
	Grasshoppers		As the grasshoppers begin to appear.		
	California Oakworm Cankerworms (Spring and Fall)	0.28 to 0.56 lb. (4.4 to 8.9 oz.)	As the insects begin to appear. Use the higher listed amount when the larger larvae are present.		
	Nantucket Pine Tip Moth Larvae	0.83 lb. (13.3 oz)	Time of application is important. Consult your Farm Advisor or County Extension Agent. Repeat applications will be required for subsequent generations.		
	Root Weevil Adults		Apply when first feeding damage occurs. Repeat applications at four week intervals until the first heavy frost may be necessary for complete foliage protection.		
	Box Elder Bugs Sawflies Budworms Leafhoppers		As the insects begin to appear.		
	Japanese Beetle	1.1 lbs. (17.6 oz.)	As the Japanese Beetles begin to appear. Repeat applications at 2 week intervals may be necessary.		
Elm Leaf Beetle (larvae)		As the larvae begin to appear. ACEPHATE 90 DF will not prevent Elm Leaf Beetle eggs from hatching.			

**ORNAMENTAL TREES AND SHRUBS (CONTINUED)**

PLANTS	PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER ACRE PER 100 GALS.	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Douglas Fir Christmas Trees	Douglas Fir Needle Midge	0.56 lb. (8.9 oz.) (equivalent to 0.56 lb. per acre)	Apply a minimum of 2 weeks prior to bud burst. For additional pest management information, consult your County Extension Service.	Apply the specified amount of ACEPHATE 90 DF in not less than 2 gals. of spray per acre by air or in 100 gals. of spray per acre by ground.	Do not make more than one application per season.
Flowering Crabapples	Aphids Leafrollers Tent Caterpillars	0.28 lb. (4.4 oz.)	As the insects begin to appear.	Apply the specified amount of ACEPHATE 90 DF in 100 gals. water with a hydraulic sprayer. Caution: Phytotoxicity has occurred on the following Crabapple varieties: Hops, Ichonoski, Malus floribunda, Pink Perfection, Red Wine and Snow Cloud.	Do not apply more than 3 times in a growing season at 4 week intervals.  Minimum spray interval is 28 days.
Crepe Myrtle	Aphids	2 to 3 level Tbsp. (0.5 to 0.8 oz.) per Tbsp. of water.	As aphids begin to appear.	Make a paint-on slurry by mixing the specified amount of ACEPHATE 90 DF 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. Apply to trunks within a zone 6 to 12 inches above the ground and below the point where branching begins. For multi-trunk plants, be certain to treat all trunks. For either single or multi-trunk plants, make application as low as possible within the recommended treatment zone.	Minimum spray interval is 3 days for rates up to 0.5 lbs. ai/A and 7 days for rates greater than 0.5 lbs ai/A.

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**OUTDOOR FLORAL CROPS AND GROUND COVERS**

PLANTS	PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER 100 GALS.	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Chrysanthemums Daisies Dahlias Easter Lily Gladioli Gypsophila Pachysandra Pansy Peony Roses Sedum Statice Strawflower Yarrow Zinnia	Aphids Thrips Lygus	0.56 lb. (8.9 oz.)	As insects begin to appear. Repeat applications at a minimum of 14 day intervals may be necessary.	Apply the specified amount of ACEPHATE 90 DF in 100 gals. water with a hydraulic sprayer as a full coverage spray. Multiple applications may cause slight tip burn or marginal leaf necrosis on some varieties. Test on a few plants to determine varietal susceptibility.	If flowers are to be cut, do not apply more than 0.83 lb/acre ACEPHATE 90 DF (0.75 lbs ai/100 gallons) per 100 gals. For all other ornamentals, application rates must not exceed 1.1 lb./acre ACEPHATE 90 DF (1.0 lbs ai) per 100 gals.  Do not apply using low-pressure hand wand.
Roses Boston Ivy	Japanese Beetles	0.83 to 1.1 lbs. (13.3 to 17.7 oz.)	As the Japanese Beetles begin to appear. Repeat applications at a minimum of 14 day intervals may be necessary.		

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COMMERCIAL GREENHOUSE FLORAL AND FOLIAGE PLANTS

PLANTS	PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER 100 GALS.	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Roses	Leafrollers	0.56 to 0.83 lb. (8.9 to 13.3 oz.)	As leafrollers begin to appear. Use the higher listed amount when large larvae are present.	Apply the specified amount of ACEPHATE 90 DF in 100 gals. water with a hydraulic sprayer as a full coverage spray.	If flowers are to be cut, do not apply more than 0.83 lb/acre ACEPHATE 90 DF (0.75 lbs ai/100 gallons) per 100 gals. For all other ornamentals, application rates must not exceed 1.1 lb./acre ACEPHATE 90 DF (1.0 lbs ai) per 100 gals.
Foliage Plants Orchids Anthuriums Cacti Poinsettia	Aphids	0.28 lb. (4.4 oz.)	As aphids begin to appear.	Apply the specified amount of ACEPHATE 90 DF in 100 gals. water with a hydraulic sprayer as a full coverage spray. The addition of a wetting agent may be required on difficult to wet foliage.  Caution: Phytotoxicity has occurred on the following foliage plants: Bletchum gibbum, Cissus antarctica, Ficus triangularis, Fittonia verschaffeltii, Maranta leuconeura kerchoveana, Pachystachya lutea, Plectranthus australis, Polypodium aureus, Polystichum, Pteris ensiformis, Tolmiea menziesii. Before treating large plantings spray only a few plants and observe 2 weeks for varietal phytotoxicity.  Application of ACEPHATE 90 DF on Poinsettias after bract formation may result in phytotoxicity on certain varieties.	Retreatment interval = 5 days
	Mealybugs Thrips Whiteflies	0.56 lb. (8.9 oz.)	As the insects begin to appear. A repeat application, at a 2 week interval, may be necessary for control of mealybugs and whiteflies. Minimum retreatment interval = 5 days.		
	Scales (Crawlers)		As crawlers begin to appear. Repeat applications at a 2 week or more interval may be necessary where there is continuous crawler infestation.		

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	Sweetpotato/ Silverleaf Whiteflies (Except CA)	0.56 lb. (8.9 oz.) plus TAME® 2.4 EC Spray 10 2/3 fl. oz. (0.2 lb. a.i.)	Apply when insects first appear. If a population is well established, make one application of the tank mix and follow 5 to 7 days later with TAME alone at 16 fl. oz/100gal. See TAME label for instructions.	For Sweetpotato/ Silverleaf whitefly control, apply the specified amount of ACEPHATE 90 DF 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 90 DF and TAME alone and the rotation instruction to avoid potential resistance.	
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**COMMERCIAL GREENHOUSE FLORAL AND FOLIAGE PLANTS (CONTINUED)**

PLANTS	PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER 100 GALS.	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Roses Carnations Chrysanthemum	Aphids Thrips	0.56 lb. (8.9 oz.)	As aphids begin to appear  As thrips begin to appear or at the tight flower bud stage.  Repeat applications to roses may be necessary at two week intervals.	Apply the specified amount of ACEPHATE 90 DF in 100 gals. water with a hydraulic sprayer as a full coverage spray. Do not apply more often than once every 28 days to Carnations and Chrysanthemum. Caution: Phytotoxicity has occurred on the following Chrysanthemum varieties: Albatross, Bonnie Jean, Dixie, Garland, Gent, Iceberg, Pride, Showoff, Statesman, Tally Ho, Westward Ho, and Wild Honey. Before treating large Chrysanthemum plantings, spray only a few plants and observe two weeks for varietal phytotoxicity. Application to chrysanthemums and roses with open flowers will cause injury to the flowers. Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption.	Do not apply more than 0.83 lb/acre ACEPHATE 90 DF per 100 gal.

**COMMERCIAL TURFGRASS: SOD FARMS AND GOLF COURSES ONLY**

Do not allow livestock to graze treated areas. Do not feed treated grass to livestock. 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. Do not apply by air.

PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER 1,000 SQ. FT. GOLF COURSES	AMOUNT ACEPHATE 90 DF PER 1,000 SQ. FT. SOD FARM TURF	APPLICATION TIMING	APPLICATION INSTRUCTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST	RESTRICTIONS
Fall Armyworm Yellow Striped Armyworm Southern Armyworm	0.4 to 1 oz. (1.1 to 2.7 lbs. per acre)	0.4 to 1 oz. (1.1 to 2.7 lbs. per acre)	Apply when the insects first appear. A repeat application may be needed.	Apply the specified amount of ACEPHATE 90 DF per 1,000 sq. ft. Use a minimum of 5 gals. water per 1,000 sq. ft. to obtain good coverage.	7	3 (Sod farm turf)	<p>For all applications:</p> <p>Aerial applications are prohibited.</p> <p>Do not allow livestock to graze.</p> <p>Do not feed treated grass to livestock.</p> <p>For Sod/Turf: Do not apply by air.</p> <p>Maximum Application Rate for Sod/ Turf: Do not apply more than 3 lbs. ai/A.</p> <p>Maximum Application Rate for Golf Course Turf: Do not apply more than 4 lbs ai/A.</p>
Cutworm	1 to 1.6 oz. (2.7 to 4.3 lbs. per acre)	1 to 1.2 oz. (2.7 to 3.2 lbs. per acre)					
Chinch bugs	1 to 1.6 oz. (2.7 to 4.3 lbs. per acre)	1 to 1.2 oz. (2.7 to 3.2 lbs. per acre)	Apply as needed for adult population knockdown. A repeat application may be needed.	Apply the specified amount of ACEPHATE 90 DF per 1,000 sq. ft. Use 1 to 15 gals. water per 1,000 sq. ft. to obtain good coverage.	7		



				For heavy infestations, use the higher dosage rate.		
Leafhopper	0.8 oz. (2.3 lbs. per acre)	0.8 oz. (2.3 lbs. per acre)	As the leafhoppers begin to appear. A repeat application may be needed.		7	
Sod Webworm (Crambus spp.)	0.4 to 0.8 oz. (1.1 to 2.3 lbs. per acre)	0.4 to 0.8 oz. (1.1 to 2.3 lbs. per acre)	As the webworms begin to appear. A repeat application may be needed.			
Mole Crickets (Except CA) Spittlebug (Except CA)	0.8 to 1.6 oz (2.3 to 4.3 lbs. per acre)	0.8 to 1.2 oz (2.3 to 3.2 lbs. per acre)	As insects begin to appear. More than one application may be required throughout the growing season for knockdown of existing populations. Apply during late afternoon or early evening hours and after an irrigation. Do not irrigate after application. <b>See Footnote 1.</b>			
Greenbug (Schizaphis graminum) Grasshoppers	0.4 oz. (1.1 lbs. per acre)	0.4 oz. (1.1 lbs. per acre)	Apply when the insects first appear. A repeat application may be needed.	Apply the specified amount of ACEPHATE 90 DF per 1,000 sq. ft. Use 4 gals. water per 1,000 sq. ft. to obtain good coverage. Do not mow turfgrass for at least 24 hours after application.		

**COMMERCIAL TURFGRASS: SOD FARMS AND GOLF COURSES ONLY – (CONTINUED)**

PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER 1,000 SQ. FT. GOLF COURSES	AMOUNT ACEPHATE 90 DF PER 1,000 SQ. FT. SOD FARM TURF	APPLICATION TIMING	APPLICATION INSTRUCTIONS	MINIMUM SPRAY INTERVAL (DAYS)	DAYS TO HARVEST
Black Turfgrass Ataenius (Except CA)	1.3 to 1.6 oz. (3.4 to 4.3 lbs. per acre)	1.2 oz. (3.2 lbs. per acre)	Apply when the insects first appear. A repeat application may be needed.	Apply the specified amount of ACEPHATE 90 DF per 1,000 sq. ft. Use a minimum of 5 gals. water per 1,000 sq. ft. Irrigate lightly (no more than 0.5 inches) after application. Use the higher rate for severe infestations.	7	3 (Sod farm turf)
Dichondra on Golf Courses and Sod Farms: Cutworm Flea Beetle Southern Armyworm Yellow Striped Armyworm	0.83 to 1.6 oz. (2.3 to 4.3 lbs. per acre)	0.83 to 1.2 oz. (2.3 to 3.2 lbs. per acre)		Apply the specified amount of ACEPHATE 90 DF per 1,000 sq. ft. Use a minimum of 15 gals. water per 1,000 sq. ft. to obtain good coverage.	7	3 (Sod farm turf)

**Footnote 1:** 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 ACEPHATE 90 DF. The following lemon-scented products have been shown to be effective flushing agents: Lemon Joy, Lemon Palmolive, and Mighty Myrt Products Manufacture- Base Pure Lemon Fragrance. The use rate for these lemon-scented products is 2 teaspoons per gallon of water for small total mix volumes or 6 fl. oz per 50 gals. of water for large mix volumes.

**MOUND TREATMENT OF FIRE ANTS AND HARVESTER ANTS IN TURFGRASS**

PLANTS	PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF	APPLICATION TIMING	APPLICATION INSTRUCTIONS
Turfgrass:  Residential, Recreational and Commercial Turf	Fire Ants, Harvester Ants*	<b>Mound Treatment — Drench Method:</b> Mix 0.83 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.	When insects first appear. Ants are most active in the early morning or late afternoon and best results are achieved if applications are made at these times.  Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.	Do not allow livestock to graze treated areas. Do not feed treated grass to livestock. Do not treat mound more than once per season. <b>For Sod Farms:</b> allow at least 3 days to elapse between last application and harvesting sod.  *Not registered in CA for use to control Harvester Ants.

**OUTDOOR AND PERIMETER SPRAY (EXCLUDING RESIDENTIAL TURF)**

LOCATION	PESTS CONTROLLED	AMOUNT ACEPHATE 90 DF PER GALLON	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Outdoor and perimeter area excluding residential turf	Wasps	1.3 oz. (0.08 lbs.)	Treat early or late in the day as wasps are generally less active during these times.	Apply the specified amount of ACEPHATE 90 DF per gallon of water used.  Apply as a spot treatment to the nest, nest entrance, and surrounding areas where the wasps alight.	The use of low pressure hand wand equipment for perimeter and/or wasp treatments is prohibited.  Do not allow livestock to graze treated areas.  Do not feed treated grass to livestock.
	Ants (excluding fire, harvester, carpenter, and pharaoh ants) Crickets Cockroaches Earwigs Pillbugs		As the insects appear.	Apply specified amount of ACEPHATE 90 DF per 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 and other areas where these pests congregate.	

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

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

#### **CONTAINER HANDLING:**

**Nonrefillable container. Do not reuse or refill this container.**

Completely empty bag into application equipment. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### IMPORTANT INFORMATION READ BEFORE USING PRODUCT

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

To the extent consistent with applicable law, United Phosphorus, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or United Phosphorus, Inc., and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, UNITED PHOSPHORUS, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

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.

DANITOL® -- Reg. TM of Sumitomo Chemical Company Ltd. for fenpropathrin insecticide-miticide.

SCOUT® X-TRA -- Reg. TM of Hoechst-Roussel Agri for tralomethrin pyrethroid insecticide.