

70506-154

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

JAN 16 2008

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Mr. Timothy M. Formella  
Product Registration  
United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

SUBJECT: Application for Pesticide Notification (PRN 98-10)  
Request Primary Brand Name "First 1.6 F Insecticide"  
EPA Reg. No. 70506-154  
Application Dated November 2, 2007

Dear Mr. Formell:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated 11/02/2007 for the above product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,  
*Rachel C. Holtzman*

Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs



**EPA**

United States  
**Environmental Protection Agency**  
Washington, DC 20460

- Registration
- Amendment
- Other: *Notification*

OPP Identifier Number

**Application for Pesticide - Section I**

1. Company/Product Number 70506-154	2. EPA Product Manager Dani Daniel	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Fist 1.6 F Insecticide	PM#	
5. Name and Address of Applicant (Include ZIP Code) United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. _____  Product Name _____	

Check if this is a new address

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)

Notification of change in Primary Brand Name. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec 1001 to willfully make any false statements to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Section - III**

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
<b>*Certification must be submitted</b>		If "Yes" Unit Packaging wgt.    No. per container	If "Yes" Package wgt.    No. per container	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container Including but not limited to 2.0 oz gel per tube		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____					

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)		
Name <b>Timothy M. Formella</b>	Title <b>Senior Registration Manager</b>	Telephone No. (Include Area Code) <b>610-491-2813</b>
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received <b>(Stamped)</b>
2. Signature <i>Timothy M. Formella</i>	3. Title <b>Senior Registration Manager</b>	
4. Typed Name Timothy M. Formella	5. Date <i>Nov. 2, 2007</i>	

# FIST 1.6 F Insecticide

**ACTIVE INGREDIENT**

Imidacloprid – 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine.....	17.4%
Other Ingredients .....	82%
Total	100%

Contains 1.6 pounds of imidacloprid per gallon.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

<b>FIRST AID</b>	
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>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Contact the Rocky Mountain Poison Center at 1-866-767-5089 for emergency medical treatment information.	
<b>NOTE TO PHYSICIAN:</b> No specific antidote is available. Treat symptomatically.	

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

United Phosphorus, Inc.  
 630 Freedom Business Center, Suite 402  
 King of Prussia, PA 19406  
 1-800-438-6071 • [www.upi-usa.com](http://www.upi-usa.com)

Net Contents: }  
 EPA Reg. No. 70506-154  
 EPA Est. No. }

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Caution. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing.

Applicators and other handlers must wear:

- Long-sleeved shirts and long pants
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes plus socks

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

**ENGINEERING CONTROLS STATEMENT**

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**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. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

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. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

**OBSERVE THE FOLLOWING PRECAUTIONS WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMENENT STREAMS; MARSHES OR NATURAL PONDS; ESTUARIES, AND COMMERCIAL FISH FARM PONDS.**

**SPRAY DRIFT MANAGEMENT**

The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

### **For Aerial Applications**

The spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used, and must not exceed 75% of the wing span or rotor diameter.

### **Importance of Droplet Size**

An important factor influencing drift is droplet size. Small droplets (<150 – 200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, applications should be made to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection. Spray should be released at the lowest possible height consistent with good pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided.

### **Wind Speed Restrictions**

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

### **Restrictions During Temperature Inversions**

Do not make ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

### **Airblast (Air Assist) Specific Recommendations for Tree Crops and Vineyards**

Airblast sprayers carry droplets into the canopy of trees/vines via a radially, or laterally directed air stream. The following specific drift management practices should be followed:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy; Block off upward pointed nozzles when there is no overhanging canopy;
- Use only enough air volume to penetrate the canopy and provide good coverage;
- Do not allow the spray to go beyond the edge of the cultivated area (i.e. turn off sprayer when turning at end rows);
- Only spray inward, toward the orchard or vineyard, for applications to the outside rows.

### **Mixing and Loading Requirements**

To avoid potential contamination of groundwater, the use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is recommended. If a containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading area and potential surface to groundwater conduits such as field sumps, uncased well heads, sinkholes, or field drains.

### **No-Spray Zone Requirements for Soil Applications**

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Do not apply by ground within 25 feet, or by air within 150 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.

**Run-off Management**

Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip. When using F1st 1.6 F Insecticide on erodible soils, Best Management Practices for minimizing run-off should be employed. Consult your local Natural Resources Conservation Service for recommendations in your use area.

**ENDANGERED SPECIES NOTICES**

Under the Endangered Species Act it is a federal offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local county bulletin, County Extension Agent, or Pesticide State Lead Agency for information concerning endangered species in your area.

**RESISTANCE MANAGEMENT**

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area.

F1st 1.6 F Insecticide contains a Group 4A Insecticide. Insecticide biotypes with acquired or inherent resistance to Group 4A may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species.

The active ingredient in F1st 1.6 F Insecticide belongs to the neonicotinoid chemical class. Insect pests resistant to other chemical classes have not shown cross-resistance to F1st 1.6 F Insecticide. In order to maintain susceptibility to this class of chemistry in insect species with high resistance development potential, it is recommended that for each crop season: 1) only a single soil application of F1st 1.6 F Insecticide be made; 2) foliar applications of products from this same class not be made following a long residual soil application of F1st 1.6 F Insecticide or other neonicotinoid products.

Foliar applications of F1st 1.6 F Insecticide or other Group 4A products from the neonicotinoid chemical class should not be used on crops previously treated with a long-residual, soil-applied product from the neonicotinoid chemical class.

Other Group 4A neonicotinoid products used as foliar treatments include: Actara, Assail, Calypso, Centric, Gaucho, Intruder, Leverage, Provado, and Trimax.

Other Group 4A neonicotinoid products used as soil/seed treatments include: ADMIRE PRO, Advise, Alias, Delay, Couraze, Cruiser, GAUCHO, Macho, Macho Max, Nuprid, Platinum, Venom, and Widow.

Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management recommendations. Also, for more information on Insect Resistance Management (IRM), visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.ircac-online.org/>.

**DIRECTIONS FOR USE**

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

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 treatment areas during the restricted entry interval (REI) of 12 hours.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. 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 such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes plus socks

**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

**To Confine Spills:** Handle and open container in a manner as to prevent spillage. If the container is leaking or material is spilled for any reason or cause, carefully sweep material into a pile and dispose of as directed for pesticides below. Refer to Precautionary Statements on label for hazards associated with the handling of this material. In spill or leak incidents, keep unauthorized people away.

**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:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of the smoke.

**APPLICATION RECOMMENDATIONS**

**Do not apply Fist 1.6 F Insecticide in enclosed structures such as greenhouses or planthouses.**

Apply Fist 1.6 F Insecticide as a directed or broadcast foliar spray, with properly calibrated ground or aerial application equipment. For best results, ensure that foliage is thoroughly covered

without runoff. To obtain thorough coverage, always use adequate spray volumes, correctly calibrated application equipment, and spray adjuvant if necessary. Inadequate coverage of leaves and fruit may result in poor control or may delay the onset of activity.

Unless otherwise recommended in crop-specific directions, minimum spray volumes are 10 gallons/A by ground, and 5 gallons/A by air. Fist 1.6 F Insecticide may be applied by overhead chemigation if allowed in crop-specific directions (see CHEMIGATION DIRECTIONS FOR USE, below).

Unless allowed by State specific supplemental labeling, the use of Fist 1.6 F Insecticide on crops grown for production of true seed intended for private or commercial planting is generally not recommended. Always take care to minimize exposure of Fist 1.6 F Insecticide to honey bees and other pollinators. Additional information on Fist 1.6 F Insecticide for use on these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants, or local United Phosphorus, Inc. representatives.

Do not apply more than 0.50 lbs. active ingredient per acre, per crop season, regardless of formulation or method of application, unless specified within a crop-specific applications section for a given crop.

**MIXING INSTRUCTIONS**

To prepare the application mixture, first add a portion of the required amount of water to the tank and then add Fist 1.6 F Insecticide while agitation is underway. Add the remainder of water needed. Agitate during both mixing and application. Fist 1.6 F Insecticide may also be used with other pesticides and/or fertilizer solutions. Please see compatibility note below. When tank mixtures of Fist 1.6 F Insecticide and other pesticides are involved, prepare the tank mixture as recommended above and follow suggested Mixing Order below.

**Mixing Order**

When making pesticide mixtures, add Fist 1.6 F Insecticide and other wettable powders or wettable granules first, followed by flowable (suspension concentrate) products, then emulsifiable concentrates last. Agitate as each ingredient is added. Do not add an ingredient until the previous one is thoroughly mixed. If a fertilizer solution is added, a fertilizer/pesticide compatibility agent may be needed. To ensure a uniform spray mixture, continuous agitation is necessary during both mixing and application.

**Compatibility Note**

Test the compatibility of any intended mixture before adding Fist 1.6 F Insecticide to the spray or mix tank. To do this, add proportionate amounts of each ingredient in the appropriate order, to a suitable size jar, cap, shake the mixture for 5 minutes, and let set for 5 minutes. If the mixing is poor, or there is formation of precipitates that do not readily redisperse, then the blend is incompatible and should not be used. For further information, contact your local United Phosphorus, Inc. representative.

**CHEMIGATION – DIRECTIONS FOR USE**

**Types of Irrigation Systems**

Chemigation applications of Fist 1.6 F Insecticide may only be made to crops through overhead sprinkler chemigation systems if specified in crop-specific use directions. Do not apply Fist 1.6 F Insecticide through any other type of irrigation system.



**Water Volume**

Fist 1.6 F Insecticide chemigation applications should be made as concentrated as possible. Retention of Fist 1.6 F Insecticide on the site of insect infestation is necessary for best control. Chemigation of Fist 1.6 F Insecticide in water volumes greater than 0.10 inches/A are not recommended.

**Uniform Water Distribution and System Calibration**

The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

**Chemigation Monitoring**

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.

**Drift**

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

**Required System Safety Devices**

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.

**Using Water From Public Water Systems**

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must 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 or in cases where there is no water pump, when the water pressure decreases to the point where the 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.

**ROTATIONAL CROPS\***

Treated areas may be replanted with any crop specified on an imidacloprid label, or any crop for which a tolerance exists for the active ingredient, as soon as practical following the last application. For crops not listed on an imidacloprid label, or for crops with no established tolerances for the active ingredient, observe a 12 month plant-back interval.

**Immediate Plant-Back** All crops on this label plus the following crops not on this label:  
barley, canola, corn (field, pop & sweet), rapeseed, sorghum, sugarbeet and wheat

**30-Day Plant-Back** Cereals (including buckwheat, millet, oats, rice, rye, and triticale), safflower, soybean

**10-Month Plant-Back** Onion and bulb vegetables

**12-Month Plant-Back** All other crops

\* Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed.

**FIELD CROPS**

**COTTON**

PESTS	RATE Fl. oz./A	INSTRUCTIONS
<b>Controlled:</b> Cotton Aphid Cotton Fleahopper Bandedwinged Whitefly Plant Bugs (excl. <i>Lygus Hesperus</i> ) Green stink bug Southern green stink bug Bollworm/Budworm (ovicidal effect)	2.5 – 5.0	Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed. Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures. Do not apply more than 25 fl. oz. Fist 1.6 F Insecticide (0.31 lb ai)/A per crop season.
<b>Suppressed:</b> <i>Lygus</i> bug ( <i>Lygus Hesperus</i> ) Whiteflies (other than Bandedwinged whitefly)	3.8 – 5.0	Do not apply more frequently than every 7 days. Preharvest Interval: 14 days. Do not graze treated fields after any application of Fist 1.6 F Insecticide.

**TANK MIX RECOMMENDATIONS**

PESTS (in addition to pests listed above)	RATE of Fist 1.6 F Fl. oz/A	RATE of Bidrin® 8 Fl. oz./A	INSTRUCTIONS (in addition to those listed above)
<b>Early season control of:</b> Thrips	2.5 – 3.8	1.6 – 3.2	Observe all applicable precautions, limitations, and restrictions of products used in mixtures.
<b>Mid to late season control of:</b> Plant bugs Stink bugs (including Brown stink bug) Grasshoppers Saltmarsh caterpillar Cotton leafperforator	2.5 – 3.8	4.0 – 8.0	

**POTATOES**

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Aphids Colorado Potato Beetle Flea Beetles Leafhoppers Psyllids	3.8	Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.  Do not apply more than 16.0 fl. oz. Fist 1.6 F Insecticide (0.2 lb ai)/A per crop season. Do not apply more often than every 7 days. Preharvest interval: 7 days.  Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.

**TOBACCO**

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Aphids	2.0 – 4.0	Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.  Do not apply more than 22.4 fl. oz. Fist 1.6 F Insecticide (0.28 lb ai)/A per crop season. Do not apply more often than every 7 days. Preharvest Interval: 14 days. Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.
Flea beetles Japanese beetle	4.0	

**VEGETABLE AND SMALL FRUIT CROPS**

**FRUITING VEGETABLES**

Crops of Crop Group 8 including: Eggplant, Ground cherry, Okra, Pepper (including bell, chili, cooking, pimento and sweet), Tomato, Pepinos, Tomatillo

Not for use on crops grown for seed unless specifically allowed by Supplemental labeling.

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Aphids Colorado potato beetle Leafhoppers Whiteflies	3.8 – 6.2	Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.  Do not apply more than 19.2 fl. oz. Fist 1.6 F Insecticide (0.24 lb ai)/A per crop season. Do not apply more often than every 5 days.
Pepper weevil	6.2	

		<p>Preharvest Interval: 0 days.</p> <p><b>Pepper weevil:</b> apply specified rate by ground, making applications before the population reaches damaging levels. Incorporate applications into a full-season program, alternating effective products from multiple classes of chemistry and different modes of action in a windowed or blocked approach.</p> <p><b>Whiteflies:</b> use the higher rate when targeting adult whiteflies.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>
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**GLOBE ARTICHOKE**

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Aphids Leafhoppers	4.0 – 10.0	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Do not apply more than 40.0 fl. oz. Fist 1.6 F Insecticide (0.5 lb ai)/A per crop season. Do not apply more often than every 14 days. Preharvest Interval: 7 days.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>

**HERBS**

**Crops of Crop Subgroup 19A Including:** Angelica, Balm (lemon balm), Basil, (fresh and dried), Borage, Burnet, Chamomile, Catnip, Chervil (dried), Chinese chive, Chive, Clary, Coriander (cilantro or Chinese parsley leaves), Costmary, Cilantro (leaf), Curry (leaf), Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rosemary, Rue, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood.

This use not permitted in California unless otherwise directed by supplemental labeling.

PESTS	Rate Fluid oz./Acre	INSTRUCTIONS
Aphids Flea beetles Leafhoppers Whiteflies	3.5	<p>Apply by air or ground with properly calibrated equipment as pest population increases. Thorough coverage is necessary for best control. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>The addition of an organosilicone adjuvant at a rate no higher than the manufacturer's recommended use rate</p>

		<p>may improve coverage and control.</p> <p>Do not apply more than 10.5 fl. oz. Fist 1.6 F Insecticide (0.13 lb ai)/A per crop season. Do not apply more often than every 5 days. Preharvest Interval: 7 days.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p> <p>Note: not all varieties listed have been tested for phytotoxicity. United Phosphorus, Inc. strongly recommends that small areas or numbers of plants be treated and evaluated before commercial spraying.</p>
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**HEAD AND STEM BRASSICA VEGETABLES**

Crops of Crop Group 5 including: Broccoli, Broccoli raab (rapini), Brussel sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (gai lon) broccoli, Chinese (bok choy) cabbage, Chinese (napa) cabbage, Chinese mustard (gai choy) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard Spinach, Rape greens.

Not for use on crops grown for seed unless specifically allowed by Supplemental labeling.

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Aphids Flea beetles Leafhoppers Whiteflies	3.8	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Do not apply more than 19.2 fl. oz. Fist 1.6 F Insecticide (0.24 lb ai)/A per crop season. Do not apply more often than every 5 days. Preharvest Interval: 7 days.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>

**LEAFY GREEN VEGETABLES**

Crops of Crop Subgroup 4A Plus Watercress including: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Roquette), Chervil, Chrysanthemum (edible leaved and garland), Cilantro, Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)), Watercress (commercial production only, application must not be made to native cress growing in streams or other bodies of water), Watercress (upland).

Not for use on crops grown for seed unless specifically allowed by Supplemental labeling

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Aphids	3.8	Apply as a broadcast or directed foliar spray as pest

<p>Flea beetles Leafhoppers Whiteflies</p>		<p>population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Do not apply more than 19.2 fl. oz. Fist 1.6 F Insecticide (0.24 lb ai)/A per crop season. Do not apply more frequently than every 5 days. Preharvest Interval: 7 days.</p> <p>When applying to watercress, production fields must be drained of water no less than 24 hours before application, and water must not be reapplied to the field for at least 24 hours after application. Only apply to fully leafed-up canopies.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>
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**LEGUME VEGETABLES**

Crops of Crop Group 6 (except soybean, dry), including: Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean

Bean (*Lupinus* spp., includes grain lupin, sweet lupin, white lupin, and white sweet lupin)

Bean (*Phaseolus* spp., includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean)

Bean (*Vigna* spp., includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpeas, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean)

Pea (*Pisum* spp., includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)

Other Beans and Peas (Broad Bean (fava), Chickpea (garbonzo bean), Guar, Jackbean, Lablab bean (hyacinth bean), Lentil, Pigeon pea, Soybean (immature seed), Sword bean)

Not for use on crops grown for seed unless specifically allowed by Supplemental labeling

PESTS	RATE Fl. oz./A	INSTRUCTIONS
<p>Aphids Leafhoppers Whiteflies</p>	<p>3.5</p>	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Do not apply more than 10.5 fl. oz. Fist 1.6 F Insecticide (0.13 lb ai)/A per crop season. Do not apply more often than every 7 days. Preharvest Interval: 7 days.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products</p>

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	used in mixtures.	
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**ROOT, TUBEROUS, AND CORM VEGETABLES**

Crops of Crop Group 1 (except sugarbeet), including: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden\*), Burdock (edible\*), Canna (edible, Queensland arrowroot), Carrot\*, Cassava (bitter & sweet)\*, Celeriac\*, Chayote (root), Chervil (turnip-rooted\*), Chicory\*, Chufa, Dasheen (taro)\*, Ginger, Ginseng, Horseradish, Leren, Parsley (turnip-rooted), Parsnip\*, Radish\*, Oriental Radish (diakon\*), Rutabaga\*, Salsify, (black)\*, Salsify (oyster plant), Salsify (Spanish\*), Skirret, Sweetpotato\*, Tanier (cocoyam)\*, Turmeric, Turnip\*, Yam bean (jicama, manioc pea), Yam (true)\*.

\* Tops or greens from these crops may be used for food or feed.

Not for use on crops grown for seed unless specifically allowed by Supplemental labeling

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Aphids Flea beetles Leafhoppers Whiteflies	3.5	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Do not apply more than 3.5 fl. oz. Fist 1.6 F Insecticide (0.044 lb ai)/A per crop season on radish; do not apply more than 10.5 fl. oz. Fist 1.6 F Insecticide (0.13 lb ai)/A per crop season on other crops. Do not apply more than once to carrots per crops season; do not apply more than 3 times to other crops per crop season.</p> <p>Do not apply more often than every 5 days. Preharvest Interval: 7 days.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>

**STRAWBERRIES**

Not for use on crops grown for seed unless specifically allowed by Supplemental labeling.  
Do not use both application methods on the same crop in the same season.

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Aphids Spittlebugs Whiteflies	3.8	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Do not apply during bloom or within 10 days before bloom, or when bees are actively foraging.</p> <p>Do not apply more than 11.4 fl. oz Fist 1.6 F Insecticide (0.14 lb ai)/A per crop season.</p>

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		<p>Do not apply more often than every 5 days. Preharvest Interval: 7 days.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>
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**TREE, BUSH, AND VINE CROPS**

For tree and vine crops, rates are based on full-size, mature trees or vines.

**BANANA AND PLANTAIN**

This use is not permitted in California unless otherwise directed by supplemental labeling.

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Aphids Leafhoppers Thrips	8.0	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Apply by ground or air. If applied by air, activity may be slower, and control may be less relative to results from ground application.</p> <p>Do not apply more than 40.0 fl. oz. Fist 1.6 F Insecticide (0.5 lb ai)/A per crop season. Do not apply more often than every 14 days. Preharvest Interval: 0 day.</p> <p>The addition of an organosilicone adjuvant at a rate of no more than 2.0 fl. oz./100 gallons of finished spray solution may improve coverage and control. Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>

**BUSHBERRIES**

Crops of Crop Subgroup 13B including: Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, Salal

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Aphids Leafhoppers/ Sharpshooters	3.0 – 4.0	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Apply in a minimum of 20.0 GPA by ground or 5.0 GPA by air. Do not apply prebloom or during bloom or when bees are actively foraging.</p>
Blueberry maggot Japanese beetle adults Thrips (foliage feeding thrips only)	6.0 – 8.0	



		<p>Do not apply more than 40.0 fl. oz. Fist 1.6 F Insecticide (0.5 lb ai)/A per crop season.          Do not apply more often than every 7 days.          Preharvest Interval: 3 days.</p> <p>Do not make more than 5 applications per crop season. Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>
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**CITRUS**

Crops of Crop Group 10 including: Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Tangelo, Satsuma mandarin, White sapote spp. (*Casimiroa* spp), and other cultivars and/or hybrids of these.

PESTS	RATE Fl. Oz./A	INSTRUCTIONS
<p><b>Controlled:</b>            Aphids            Asian citrus psyllid            Blackfly            Leafhoppers/Sharpshooters            Leafminers            Mealybugs            Scales            Whiteflies</p>	<p>10.0 – 20.0            depending on tree size, target pest, and level of infestation</p>	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.            Do not apply more than 40 fl.oz. Fist 1.6 F Insecticide (0.5 lb ai)/A per crop season.            Do not apply more often than every 10 days.</p>
<p><b>Suppressed:</b>            Thrips (foliage feeding thrips only)</p>	<p>10.0 - 20.0</p>	<p>Preharvest Interval: 0 days.            Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.            Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>
<p><b>For use only in Florida:</b>            Control of Asian citrus psyllid</p>	<p>10.0 – 20.0</p>	

**COFFEE**

**This use is not permitted in California unless otherwise directed by supplemental labeling.**

PESTS	RATE Fluid oz./Acre	INSTRUCTIONS
<p><b>Controlled:</b>            Aphids            Leafhoppers            Whiteflies</p> <p><b>Suppressed:</b>            Scales</p>	<p>8.0</p>	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Apply by ground or air. If applied by air, activity may be slower, and control may be less relative to results from ground application.</p>

		<p>Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p> <p>Preharvest Interval: 7 days.</p> <p>Do not apply more than 40 fl.oz. Fist 1.6 F Insecticide (0.5 lb ai)/A per crop season.</p> <p>Do not apply more often than every 7 days.</p>
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**GRAPES**, Including: American bunch grape, Muscadine grape and Vinifera grape.

<b>PESTS</b>	<b>RATE Fl. Oz./A</b>	<b>INSTRUCTIONS</b>
<p><b>Controlled:</b> Mealybugs Leafhoppers/Sharpshooters Grapeleaf Skeletonizer</p>	<p>3.0 – 4.0</p> <p>3.8 – 4.0</p>	<p>Apply as a broadcast or directed foliar spray by ground only as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Do not apply more than 8.0 fl. oz. Fist 1.6 F Insecticide (0.1 lb. ai)/A per crop season.</p> <p>Do not apply more often than every 14 days.</p> <p>Preharvest Interval: 0 days.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>

**HOPS**

<b>PESTS</b>	<b>RATE Fl. Oz./A</b>	<b>INSTRUCTIONS</b>
Aphids	8.0	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Do not apply more than 24.0 fl. oz. Fist 1.6 F Insecticide (0.3 lb ai)/A per crop season.</p> <p>Do not apply more often than every 21 days.</p> <p>Preharvest Interval: 28 days.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>

**POME FRUIT**

Crops of Crop Group 11 including: Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

PESTS	RATE Fl. oz./A	INSTRUCTIONS
Leafhoppers	4.0-8.0	Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.  Do not apply prebloom or during bloom or when bees are actively foraging.
Aphids (except woolly apple aphid) Apple maggot Leafminers San Jose scale	8.0	
<b>For Pear, Only</b> Mealybugs Pear psylla	20.0	Do not apply more than 40.0.0 fl. oz. Fist 1.6 F Insecticide (0.5 lb ai)/A per crop season. Do not apply more often than every 10 days. Preharvest Interval: 7 days.  Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.

**POMEGRANATE**

This use is not permitted in California unless otherwise directed by supplemental labeling.

PESTS	RATE Fl. oz./A	INSTRUCTIONS
<b>Controlled:</b> Aphids Leafhoppers/Sharpshooters Whiteflies  <b>Suppressed:</b> Scales	8.0	Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.  Do not apply prebloom or during bloom or when bees are actively foraging.  Do not apply more than 24.0 fl. oz. Fist 1.6 F Insecticide (0.3 lb ai)/A per crop season. Do not apply more often than every 7 days. Preharvest Interval: 7 days.  Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.

**TREE NUTS**

Crops of Crop Grouping 14 including: Almond, Beechnut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory Nut, Macadamia Nut, Pecan, Pistachio, Walnut (Black and English)

This use is not permitted in California unless otherwise directed by supplemental labeling.

PESTS	RATE Fl. Oz./A	INSTRUCTIONS
Aphids (except Black pecan)	3.5 – 7.0	Apply as a broadcast or directed foliar spray

<p>aphid)                  Leafhoppers/Sharpshooters                  Phylloxera sp. (leaf infestations)                  Spittlebugs                  Whiteflies</p>		<p>as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Use at least 50 GPA for ground application or 25 GPA for air application. Two applications may be needed for control; scout fields and retreat if needed.</p>
<p>Black pecan aphid                  Mealybugs                  San Jose scale</p>	<p>8.0</p>	<p>San Jose scale – time applications according to the crawler stage, and treat each successive generation. Make two applications at 10 to 14-day intervals if necessary to achieve control.</p> <p>Do not apply more than 28.8 fl. oz. Fist 1.6 F Insecticide (0.36 lb. ai)/A per crop season. Do not apply more often than every 6 days. Preharvest Interval: 7 days.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>

**STONE FRUITS**

Crops of Crop Group 12 including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh and dried)

PESTS	RATE Fl. Oz./A	INSTRUCTIONS
<p><b>Controlled:</b>                      Aphids                      Green June beetle                      Leafhoppers/                      Sharpshooters                      Plant bugs                      Rose chafer                      San Jose scale</p>	<p>4.0 – 8.0</p>	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed. Do not apply in less than 50 GPA by ground, or 25 GPA by air.</p> <p>Do not apply pre-bloom or during bloom or when bees are actively foraging.</p>
<p>Cherry fruit fly</p>	<p>6.0 – 8.0</p>	
<p><b>Suppressed:</b>                      Plum curculio                      Stink bugs</p>	<p>8.0</p>	<p><b>Apricot, Nectarine, Peach:</b>                      Do not apply more than 24.0 fl. oz Fist 1.6 F Insecticide (0.3 lb ai)/A per crop season. Do not apply more often than every 7 days. Preharvest Interval: 0 days.</p> <p><b>Cherries, Plums, Plumcot, Prune:</b>                      Do not apply more than 40.0 fl. oz. Fist 1.6 F Insecticide (0.5 lb ai)/A per crop season. Do not apply more often than every 10 days. Preharvest Interval: 7 days.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>

**TROPICAL FRUIT**

Including: Acerola, Atemoya\*, Avocado, Birida\*, Black sapote, Canistel, Cherimoya\*, Feijoa, Jaboticaba, Guava, Llama\*, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan Rambutan, Sapodilla, Soursop\*, Spanish lime, Star apple, Starfruit, Sugar apple\*, Wax jambu

\*Not for this use in California except when allowed by Supplemental labeling.

PESTS	RATE Fl. Oz./A	INSTRUCTIONS
<b>Controlled:</b> Aphids Leafhoppers/ Sharpshooters Mealybugs Thrips (foliage feeding only) Whiteflies	8.0	Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed. Do not apply prebloom or during bloom or when bees are actively foraging. Do not apply more than 40.0 fl. oz.
<b>Suppressed:</b> Scales	8.0	Fist 1.6 F Insecticide (0.5 lb ai)/A per crop season. Do not apply more often than every 10 days. Preharvest Interval: 7 days. Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.

**OTHER CROPS****POPLAR/COTTONWOOD**

Including: members of the genus *Populus* grown for pulp or timber

Not for this use in California except when allowed by Supplemental labeling.

PESTS	RATE Fl. Oz./A	INSTRUCTIONS
Aphids Leaf beetles	4.0 – 8.0	Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed. Do not apply prebloom or during bloom or when bees are actively foraging. Do not apply more than 40.0 fl. oz. Fist 1.6 F Insecticide (0.5 lb ai)/A per crop season. Do not apply more often than every 10 days. Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.

**CHRISTMAS TREES**

PESTS	RATE	INSTRUCTIONS
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	<b>Fl. Oz./A</b>	
Aphids Adelgids Sawflies	4.0 – 8.0	<p>Apply as a broadcast or directed foliar spray as pest population increases. Thorough coverage is necessary for best control; a spray adjuvant may be used to improve coverage. Two applications may be needed for control; scout fields and retreat if needed.</p> <p>Do not apply more than 40.0 fl. oz. Fist 1.6 F Insecticide (0.5 lb ai)/A per crop season.</p> <p>Do not apply more often than every 10 days.</p> <p><b>Gall-forming adelgids:</b> make application to coincide with full bud-swell or first bud-break of the earliest bud-breaking trees. After gall formation, treatment will not be effective.</p> <p>Fist 1.6 F Insecticide may be tank mixed with other labeled insecticides. Always follow all applicable precautions, limitations, and restrictions of products used in mixtures.</p>

**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.**

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