

264-763

04/11/2006

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

APR 11 2006

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Dr. Jamin Huang  
Bayer Environmental Science  
2 T.W. Alexander Drive  
Research Triangle Park, NC 27709

Subject: Revised Application Rate and Added Rotational Crop Interval  
Provado 1.6 Flowable Insecticide  
EPA Reg. No. 264-763  
Your Submission date, November 30, 2004

Dear Dr. Huang:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable provided you make the following changes:

1. Under the heading "Leafy Vegetables" replace the original footnote restrictions, (1) Use not permitted in California unless otherwise directed by supplemental labeling.
2. Remove the following from the "Tropical Fruit" section of the label as these crops have not yet been approved for Imidacloprid use:
  1. Atemoya,
  2. Birida
  3. Cherimoya
  4. Custard Apple
  5. Llama
  6. Sugar Apple

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A stamped copy is enclosed for your records. Submit two (2) copies of your final printed labeling before your release the product for shipment. If there are questions, call me at 703 305-5409.

Sincerely,



Dani Daniel  
Insecticide-Rodenticide Branch  
Registration Division 7505C

APR 11 2006

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
264-763

GROUP **4A** INSECTICIDE

# Provado® 1.6 Flowable Insecticide

For control of certain insects infesting various crops.

**ACTIVE INGREDIENT:**

Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine ..... 17.4%

**INERT INGREDIENTS:**.....

82.6%

Contains 1.6 pounds of imidacloprid per gallon.

**SHAKE WELL BEFORE USING**

100.0%

EPA Reg. No. 264-763

EPA Est. No. 3125-MO-001

**STOP - Read the label before use  
Keep out of reach of children**

## CAUTION

For MEDICAL And TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577  
For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

### FIRST AID

<b>IF SWALLOWED:</b>	<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 a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. 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>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

In case of emergency call toll free the Bayer CropScience Emergency Response Telephone No. 1-800-334-7577. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

**Note To Physician:** No specific antidote is available. Treat the patient symptomatically.

### 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 shirt 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 statements:**

- When handlers use closed systems, enclosed cabs, or aircraft 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**

**User should:**

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

**ENVIRONMENTAL HAZARDS**

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; PERMANENT 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 of these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

**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 containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading areas and potential surface to groundwater conduits such as field sumps, uncased well head, sinkholes or field drains

**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 by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure.

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 aerial or 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 temperature 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.

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**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.

**No-Spray Zone Requirements for Foliar Applications**

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.

**Runoff Management**

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

**Endangered Species Notice**

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.

PROVADO® 1.6 Flowable Insecticide contains a Group 4A insecticide. Insect biotypes with acquired or inherent tolerance to Group 4A products may eventually dominate the insect population if Group 4A products are used repeatedly as the predominant method of control for targeted species. This may eventually result in partial or total loss of control of those species by PROVADO® and to other Group 4A products.

The active ingredient in PROVADO® is a member of neonicotinoid chemical group. Avoid using a block of more than three consecutive applications of PROVADO® and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, Bayer CropScience strongly encourages the rotation to a block of applications with effective products of a different mode before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with other IPM practices, is considered an effective use strategy for preventing or delaying an insect's pest's ability to develop resistance to this class of chemistry.

Foliar applications of PROVADO® 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, Clutch, Intruder, LEVERAGE® and TRIMAX®. Other Group 4A, neonicotinoid products used as soil treatment include: ADMIRE® and Platinum.

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://irac-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.

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### AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 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 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. Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away. You may contact the Bayer CropScience Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Bayer CropScience Emergency Response telephone number is 1-800-334-7577.

**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 smoke.

### APPLICATION DIRECTIONS

PROVADO® should be applied as a directed or broadcast foliar spray. Thorough coverage of foliage is necessary without runoff for optimum insecticidal efficacy. Use adequate spray volumes, properly calibrated application equipment and spray adjuvant if necessary to obtain thorough coverage. Failure to provide adequate coverage and retention of PROVADO® on leaves and fruit may result in loss of insect control or delay in onset of activity. PROVADO® may be applied with properly calibrated ground or aerial application equipment. Minimum recommended spray volumes unless otherwise specified on crop specific Recommended Application sections are 10 gallons/Acre by ground application and 5 gallons/Acre through aerial equipment. PROVADO® may also be applied by overhead chemigation (see additional CHEMIGATION DIRECTIONS FOR USE section below) if allowed in crop specific Recommended Application section.

PROVADO® use on crops grown for production of true seed intended for private or commercial planting is generally not recommended but may be allowed under State specific supplemental labeling. As with any insecticide, care should be taken to minimize exposure of PROVADO® to honey bees and other pollinators. Use of PROVADO® on crops requiring bee pollination should be avoided during bloom and a minimum of 10 days prior to bloom. Additional information on PROVADO® uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants or local Bayer CropScience representatives.

Do not apply more than 0.5 lbs. active ingredient per acre, per crop season, regardless of formulation or method of application, unless specified within a crop specific recommended applications section for a given crop.

Additional product use information may be obtained by calling 1-866-99BAYER (1-866-992-2937) or visiting our web site at [www.bayercropscienceus.com](http://www.bayercropscienceus.com).

### MIXING INSTRUCTIONS

To prepare the application mixture, add a portion of the required amount of water to the spray tank and with agitation add PROVADO® 1.6 Flowable. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. PROVADO® 1.6 Flowable may also be used with other pesticides and/or fertilizer solutions. **Please see Compatibility Note below.** When tank mixtures of PROVADO® 1.6 Flowable and other pesticides are involved, prepare the tank mixture as recommended above and follow suggested Mixing Order below.

#### Mixing Order

When pesticide mixtures are needed, add wettable powders or wettable granules first, PROVADO® 1.6 Flowable, or other flowables second, and emulsifiable concentrates last. Ensure good agitation as each component is added. Do not add an additional component until the previous is thoroughly mixed. If a fertilizer solution is added, a fertilizer pesticide compatibility agent may be needed. Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

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**Compatibility Note**

Test compatibility of the intended tank mixture before adding PROVADO® 1.6 Flowable to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order, to a pint or quart jar, cap, shake for 5 minutes, and let set for 5 minutes. Poor mixing or formation of precipitates that do not readily re-disperse indicates an incompatible mixture that should not be used. For further information, contact your local Bayer CropScience representative.

**CHEMIGATION DIRECTIONS FOR USE**

Refer to GENERAL DIRECTIONS FOR USE section before proceeding with chemigation application.

**Types of Irrigation Systems**

Chemigation applications of PROVADO® may be made to crops through overhead sprinkler chemigation systems if specified in crop-specific Recommended Application sections. Do not apply PROVADO® through any other type of irrigation system.

**Water Volume**

PROVADO® chemigation applications should be made as concentrated as possible. Retention of PROVADO® on target site of insect infestation is necessary for optimum activity. Chemigation of PROVADO® in water volumes exceeding 0.10 inches/Acre 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 the 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 normally 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**

DO NOT APPLY PROVADO® THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM. 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. PROVADO® may be applied through irrigation systems that may be supplied by a public water system only if the water from the public water system is 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 top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

An irrigation system using water supplied from a public water system must also meet the following requirements. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid toward the injection pump.

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<b>ROTATIONAL CROPS*</b>
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 for which no tolerances for the active ingredient have been established, a 12-month plant-back interval should be observed.
<b>Immediate Plant-back:</b> All crops on this label plus the following crops not on this label: barley, canola, corn (field, sweet and pop), rapeseed, sorghum, sugar beet, and wheat.
<b>30-Day Plant-back:</b> Cereals (including buckwheat, millet, oats, rice, rye and triticale), soybeans, safflower
<b>10-Month Plant-back:</b> Onion and bulb vegetables
<b>12-Month Plant-back:</b> 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**

**Recommended Applications - PROVADO® 1.6 Flowable**

Apply specified rate per acre as a broadcast or directed foliar spray to an infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. A spray adjuvant may be used to improve coverage. PROVADO® may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. PROVADO® may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

**COTTON**

Pests Controlled	Rate fluid ounces/Acre
Cotton aphid Cotton fleahopper Bandedwinged whitefly Plant bugs (excludes <i>Lygus hesperus</i> ) Green stink bug Southern green stink bug Bollworm/Budworm (ovicidal effect)	2.5 - 5.0
<b>Pests Suppressed</b>	
Lygus bug ( <i>Lygus hesperus</i> ) Whiteflies (other than bandedwinged whitefly)	3.8 - 5.0

**Notes and Restrictions**  
 Pre-Harvest Interval (PHI): **14 days**  
 Minimum interval between applications: **7 days**  
 Maximum PROVADO® allowed per crop season: **25.0 fluid ounces/Acre** (0.31 lb. A/A)  
 Do not graze treated fields after any application of PROVADO®.  
 PROVADO® may be applied through properly calibrated ground, aerial or chemigation application equipment.

**Tank Mix Recommendations**

Pests Controlled (in addition to pests listed above)	PROVADO® 1.6 Flowable Rate fluid ounces/Acre	Bidrin® 8* Rate fluid ounces/Acre
<b>For early season control of:</b> Thrips	2.5 - 3.8	1.6 - 3.2
<b>For 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

**Notes and Restrictions (in addition to Notes and Restrictions listed above)**  
 \*Refer to the Bidrin® 8 product label for specific use recommendations; observe all restrictions and precautions that appear on the label.



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**POTATO**

Pests Controlled	Rate fluid ounces/Acre
Aphids Colorado potato beetle Flea beetles Leafhoppers Psyllids	3.8
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): <b>7 days</b> Minimum Interval between applications: <b>7 days</b> Maximum PROVADO® allowed per crop season: <b>15.2 fluid ounces/Acre</b> (0.19 lb. A/A)	

**TOBACCO**

Pests Controlled	Rate fluid ounces/Acre
Aphids	2.0 – 4.0
Flea beetles Japanese beetle	4.0
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): <b>14 days</b> Minimum interval between applications: <b>7 days</b> Maximum PROVADO® allowed per crop season: <b>22.4 fluid ounces/Acre</b> (0.28 lb. A/A)	

**VEGETABLE and SMALL FRUIT CROPS**

**Recommended Applications - PROVADO® 1.6 Flowable**

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. A spray adjuvant may be used to improve coverage. PROVADO® may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. PROVADO® may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

Crops contained within certain Crop Groups recognized by EPA are subject to change. Refer to EPA website ([www.epa.gov](http://www.epa.gov)) for latest Crop Groups.

**FRUITING VEGETABLES<sup>1/</sup>**

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

Pests Controlled	Rate fluid ounces/Acre
Aphids Colorado potato beetle Leafhoppers Whiteflies	3.8
Pepper weevil (Pepper only)	6.2
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): <b>0 day</b> Minimum interval between applications: <b>5 days</b> Maximum PROVADO® allowed per crop season: <b>19.0 fluid ounces/Acre</b> (0.24 lb. A/A)  <b>Applications</b> For pepper weevil, apply specified dosage of PROVADO® by ground equipment only, timing applications prior to a damaging population becoming established. Good coverage of foliage and fruit is necessary for optimum control. Applications of PROVADO® must be incorporated into a full-season program, where alternations of effective products from multiple classes of chemistry and different modes of action are utilized in a blocked or windowed approach. For additional information, please contact your Bayer representative, Extension Specialist or crop advisor. <sup>1/</sup> Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.	

**GLOBE ARTICHOKE**

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers	4.0 - 10.0
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 14 days Maximum PROVADO® allowed per crop season: 40.0 fluid ounces/Acre (0.5 lb. AI/A)	

**HEAD and STEM BRASSICA VEGETABLES<sup>1/</sup>**

Crops of Crop Group 5 including: Broccoli, Broccoli raab (*rapini*), Brussels 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, Turnip (tops or leaves)

**LEAFY VEGETABLES<sup>1/</sup>**

Crops of Crop Group 4 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 chickory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)), Watercress (commercial production only. Applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland)

Pests Controlled	Rate fluid ounces/Acre
Aphids Flea beetles Leafhoppers Whiteflies	3.8
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 5 days Maximum PROVADO® allowed per crop season: 19.0 fluid ounces/Acre (0.24 lb. AI/A) For applications made to watercress, production fields must be drained of water at least 24 hours prior to application and water must not be reapplied to the field for a minimum of 24 hours following the application. Applications must be made to fully leafed-up canopies only. <sup>1/</sup> Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.	

**LEGUME VEGETABLES<sup>1/</sup>**

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, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean)

**Pea** (*Pisum* spp. Includes dwarf pea, edible 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 (garbanzo bean), Guar, Jackbean, Lablab bean (hyacinth bean, lentil, Pigeon pea, soybean (immature seed), Sword bean)

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers Whiteflies	3.5
<b>Note and Restrictions</b> Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 7 days Maximum PROVADO® allowed per crop season: 10.5 fluid ounces/Acre (0.13 lb. AI/A) <sup>1/</sup> Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.	

**ROOT, TUBEROUS and CORM VEGETABLES<sup>1/</sup>**

Crops of Crop Group 1 (except sugarbeet) including: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden)<sup>2/</sup>, Burdock (edible)<sup>2/</sup>, Canna (edible, Queensland arrowroot), Carrot<sup>2/</sup>, Cassava (bitter & sweet)<sup>2/</sup>, Celeriac<sup>2/</sup>, Chayote (root), Chervil (turnip-rooted)<sup>2/</sup>, Chickory<sup>2/</sup>, Chufa, Dasheen (taro)<sup>2/</sup>, Ginger, Ginseng, Horseradish, Leren, Parsley (turnip-rooted), Parsnip<sup>2/</sup>, Radish<sup>2/</sup>, Oriental radish (diakon)<sup>2/</sup>, Rutabaga<sup>2/</sup>, Salsify (black)<sup>2/</sup>, Salsify (oyster plant), Salsify (Spanish), Skirret, Sweetpotato<sup>2/</sup>, Tanier (cocoyam)<sup>2/</sup>, Turmeric, Turnip<sup>2/</sup>, Yam bean (jicama, manioc pea), Yam (true)<sup>2/</sup>

For recommended applications on Potato see Field Crops section

Pests Controlled	Rate fluid ounces/Acre
Aphids Flea beetles Leafhoppers Whiteflies	3.5
<p><b>Note and Restrictions</b>            Pre-Harvest Interval (PHI): <b>7 days</b>            Minimum interval between applications: <b>5 days</b>            Maximum PROVADO<sup>®</sup> allowed per crop season: <b>3.5 fluid ounces/Acre</b> (0.044 lb. AI/A) on Radish; <b>10.5 fluid ounces/Acre</b> (0.13 lb. AI/A) on other crops            Maximum PROVADO<sup>®</sup> applications per crop season: <b>1</b> on Radish; <b>3</b> on other crops  <sup>1/</sup> Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.  <sup>2/</sup> Tops or greens from these crops may be utilized for food or feed.</p>	

**STRAWBERRY**

Pests Controlled	Rate fluid ounces/Acre
Aphids Spittlebugs Whiteflies	3.8
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): <b>7 days</b>            Minimum interval between applications: <b>5 days</b>            Maximum PROVADO<sup>®</sup> allowed per crop season: <b>11.4 fluid ounces/Acre</b> (0.14 lb. AI/A)            Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.</p>	

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## TREE, BUSH and VINE CROPS

### Recommended Applications - PROVADO® 1.6 Flowable

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. A spray adjuvant may be used to improve coverage. PROVADO® may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. PROVADO® may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests. Aerial application of PROVADO® may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, recommended application rates are based on full-size, mature trees or vines.

Crops contained within certain crop groups recognized by EPA are subject to change. Refer to EPA website ([www.epa.gov](http://www.epa.gov)) for latest crop groups.

### BUSHBERRY

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

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers/Sharpshooters	3.0 – 4.0
Blueberry maggot Japanese beetles (adults) Thrips	6.0 – 8.0
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): <b>3 days</b> Minimum interval between applications: <b>7 days</b> Maximum PROVADO® allowed per crop season: <b>40.0 fluid ounces/Acre</b> (0.5 lb. AI/A) Maximum number of PROVADO® applications per crop season: <b>5</b> Minimum application volume (water): 20.0 GPA – ground; 5.0 GPA – aerial. Do not apply pre-bloom or during bloom or when bees are actively foraging.	

### 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 (*Casimiroa* spp.), and other cultivars and/or hybrids of these

Pests Controlled	Rate fluid ounces/Acre
Aphids Asian citrus psyllid Black fly Leafhoppers/Sharpshooters Leafminers Mealybugs Scales Whiteflies	10.0 – 20.0 (depending on tree size, target pest and infestation pressure)
<b>Pests Suppressed</b>	
Thrips	10.0 – 20.0
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): <b>0 day</b> Minimum interval between applications: <b>10 days</b> Maximum PROVADO® allowed per crop season: <b>40.0 fluid ounces/Acre</b> (0.5 lb. AI/A) Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.	
<b>Applications</b> Scales – time applications to the crawler stage. Treat each generation.	

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**GRAPE**

Including American bunch grape, Muscadine grape and Vinifera grape.

Pests Controlled	Rate fluid ounces/Acre
Leafhoppers/Sharpshooters	
Mealybugs	3.0 – 3.8
Grapeleaf skeletonizer <sup>1/</sup>	3.8
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): <b>0 day</b> Minimum interval between applications: <b>14 days</b> Maximum PROVADO <sup>®</sup> allowed per crop season: <b>7.6 fluid ounces/Acre</b> (0.1 lb. AI/A) <sup>1/</sup> Grapeleaf skeletonizer control can be expected from ground applications that provide thorough coverage of foliage. Aerial applications may provide suppression.	

**HOP**

Pests Controlled	Rate fluid ounces/Acre
Aphids	8.0
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): <b>28 days</b> Minimum interval between applications: <b>21 days</b> Maximum PROVADO <sup>®</sup> allowed per crop season: <b>24.0 fluid ounces/Acre</b> (0.3 lb. AI/A)	

**PECAN<sup>1/</sup>**

Pests Controlled	Rate fluid ounces/Acre
Aphids(use higher rate for Black pecan aphid) <i>Phylloxera</i> Spittlebugs	3.5 to 7.0
<b>Notes and Restrictions</b> Do not apply after shuck split. Minimum interval between applications: <b>10 days</b> Maximum PROVADO <sup>®</sup> allowed per crop season: <b>28.0 fluid ounces/Acre</b> (0.35 lb. AI/A) <sup>1/</sup> Use not permitted in California unless otherwise directed by supplemental labeling.	

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**POME FRUIT**

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

Pests Controlled	Rate fluid ounces/Acre
Leafhoppers	4.0 – 8.0
Aphids (except woolly apple aphid) Leafminers San Jose scale	8.0
<b>FOR PEAR, ONLY</b> Mealybugs Pear psylla	20.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): <b>7 days</b>            Minimum interval between applications: <b>10 days</b>            Maximum PROVADO® allowed per crop season: <b>40.0 fluid ounces/Acre</b> (0.5 lb. A/A)            Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications</b>            Leafhoppers – apply low rate for low to moderate populations of white apple leafhoppers and high rate for high populations or for other leafhopper species. Apply PROVADO® while most leafhoppers are in the nymphal stage.            Leafminer – for first generation leafminer control, make application as soon as pollination is complete and bees are removed from the orchard. Greatest leafminer control will result from the earliest possible application. For second and succeeding generations of leafminer, optimal control is obtained from applications made early in the adult flight against egg and early instar larvae. A second application may be required 10 days later if severe pressure continues or if generations are overlapping. A single application may result in suppression only. PROVADO® will not control late instar larvae.            Mealybugs – apply maximum gallonage for tree with ground equipment. Ensure good spray coverage of the trunk and scaffolding limbs or other resting sites of mealybugs.            Rosy apple aphid – apply prior to leafrolling caused by rosy apple aphid.            San Jose scale – time applications to the crawler stage. Treat each generation.</p>	

**STONE FRUIT**

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 Controlled	Rate fluid ounces/Acre
Aphids Green June beetle Japanese beetle Leafhoppers/Sharpshooters Plant bugs Rose chafer San Jose scale	4.0 – 8.0
Cherry fruit fly (maggot of Eastern and Western)	6.0 - 8.0
<b>Pest Suppressed</b>	
Plum curculio Stink bugs	8.0
<p><b>Notes and Restrictions for Apricot, Nectarine, Peach:</b>            Pre-Harvest Interval (PHI): <b>0 day</b>            Minimum interval between applications: <b>7 days</b>            Maximum PROVADO® allowed per crop season: <b>24.0 fluid ounces/Acre</b> (0.3 lb. A/A)            Minimum application volume (water): 50 GPA – ground application; 25 GPA – aerial application.            Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Notes and Restrictions for Cherries, Plums, Plumcot, Prune:</b>            Pre-Harvest Interval (PHI): <b>7 days</b>            Minimum interval between applications: <b>10 days</b>            Maximum PROVADO® allowed per crop season: <b>40.0 fluid ounces/Acre</b> (0.5 lb. A/A)            Minimum application volume (water): 50 GPA – ground application; 25 GPA – aerial application            Do not apply pre-bloom or during bloom or when bees are actively foraging.</p>	

**TROPICAL FRUIT**

Including: Acerola, ~~Asimina~~, Avocado, ~~Bitter~~, Black sapote, Canistel, ~~Cherimoya~~, ~~Custard Apple~~, Feijoa, Llama, Jaboticaba, Guava, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Pulasan, Rambutan, Sapodilla, ~~Soursop~~, Spanish lime, Star apple, Starfruit, ~~Sugar Apple~~, Wax jambu

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers/Sharpshooters Thrips Whiteflies	8.0
Pest Suppressed	
Scales	8.0
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): <b>7 days</b> Minimum interval between applications: <b>10 days</b> Maximum PROVADO® allowed per crop season: <b>40.0 fluid ounces/Acre</b> (0.5 lb. AI/A) Maximum number PROVADO® applications per crop season: <b>5</b> Do not apply pre-bloom or during bloom or when bees are actively foraging.	

**OTHER CROPS**

**Recommended Applications - PROVADO® 1.6 Flowable**

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. A spray adjuvant may be used to improve coverage. PROVADO® may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. PROVADO® may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

**POPLAR/COTTONWOOD<sup>1/</sup>**

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

Pests Controlled	Rate fluid ounces/Acre
Aphids Leaf beetles	4.0 - 8.0
<b>Notes and Restrictions</b> Minimum interval between applications: <b>10 days</b> Maximum PROVADO® allowed per crop season: <b>40.0 fluid ounces/Acre</b> (0.5 lb. AI/A) Do not apply pre-bloom or during bloom or when bees are actively foraging. <sup>1/</sup> Use not permitted in California unless otherwise directed by supplemental labeling.	

**CHRISTMAS TREE**

Pests Controlled	Rate fluid ounces/Acre
Aphids Adelgids Sawflies	4.0 - 8.0
<b>Notes and Restrictions</b> Minimum interval between applications: <b>7 days</b> Maximum PROVADO® allowed per crop season: <b>40.0 fluid ounces/Acre</b> (0.5 lb. AI/A) <b>Applications</b> Gall-forming adelgids – time applications to coincide with full bud-swell or first bud-break of earliest bud-breaking trees. Once galls form spraying will be ineffective.	

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