

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF PREVENTION PESTICIDES AND TOXIC SUBSTANCES

JUN 16 2005

Ms. Karen S. Shearer: Bayer CropScience P O Box 12014, 2 T.W. Alexander Drive Research Triangle Park, NC 27709

Subject:

Amendment Label for General Clarification

Provado 70 WG Insecticide EPA Reg. No. 264-823

Your Submission date, April 4, 2005

Dear Ms. Shearer:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable, providing the following remain unchanged.

"On page 10 within the rate chart for leafy green vegetables, revise the application rate to no more than 1.1 ounces per acre.

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

Sincerely.

Dani Daniel

Insecticide-Rodenticide Branch Registration Division 7505C

Enclosure:

**INSECTICIDE** GROUP | 4A |

# PROVADO® 70 WG Insecticide

For control of certain insects infesting various crops. **ACTIVE INGREDIENT:** Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine INERT INGREDIENTS: EPA Est. No. 3125-MO-001 EPA Reg. No. 264-823

## 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**

IF SWALLOWED:	Call a poison control center or doctor immediately for treatment advice.
	Have person sip a glass of water if able to swallow.
	<ul> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> </ul>
	Do not give anything by mouth to an unconscious person.
IF IN EYES:	<ul> <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> </ul>
	Call a poison control center or doctor for treatment advice.
IF ON SKIN OR	Take off contaminated clothing.
CLOTHING:	Rinse skin immediately with plenty of water for 15 to 20 minutes.
	Call a poison control center or doctor for treatment advice.

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

Attached to the patient symptomatically

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

In EPA Letter Dateds 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.

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

JUN 16 2005 Under the Federal Insecticide. Fungicide, and Rodenticide Act. as amended, for the pesticide to distored under EPA Reg. No.

WILL COMMENTS

## **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 aduatic 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 area and potential surface to groundwater conduits such as field sumps, uncased well heads, 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.

## 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 National 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® 70 WG Insecticide contains a Group 4A insecticide. Insect biotypes with acquired or inherent tolerance to Group 4A insecticides 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 PROVADO® is a member of the neonicotinoid chemical class. 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 of action 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 population'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 ENCORE®.

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 <a href="http://irac-online.org">http://irac-online.org</a>.

## 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 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:

- · 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, polyet
- 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**

## Do Not Apply PROYADO® In Enclosed Structures Such As Greenhouses Or Planthouses.

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. Except where otherwise specified, 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 lb active ingredient per acre, per crop season, regardless of formulation or method of application, unless specified within a crop-specific Recommended Application 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.

## **MIXING INSTRUCTIONS**

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

### Mixing Order

When pesticide mixtures are needed, add PROVADO® and other wettable powders or wettable granules first, flowable (suspension concentrate) products 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.

#### Compatibility Note

Test compatibility of the intended mixture before adding PROVADO® 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 redisperse indicates an incompatible mixture that should not be used. For further information, contact your local Bayer CropScience representative.

## CHEMIGATION DIRECTIONS FOR USE

Refer to 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 0.1 inch/Acre is 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 systems must contain a functional, reduced-pressure zone, back flow preventer (rpz) or the 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 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 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 for which no tolerances for the active ingredient have been established, a 12-month plant-back interval should be observed.

## Immediate Plant-back

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.

## 30-Day Plant-back

Cereals (including buckwheat, millet, oats, rice, rye, and triticale), soybeans, safflower

#### 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**

## Recommended Applications - PROVADO 70 WG

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.

## COTTON

Pests Controlled	Rate ounces/Acre
Cotton aphid	•
Cotton fleahopper Bandedwinged whitefly	
Plant bugs (excludes <i>Lygus hesperus</i> ) Green stink bug Southern green stink bug	1.1
Bollworm/Budworm (ovicidal effect)	
Pests Suppressed	
Lygus bug ( <i>Lygus hesperus</i> ) Whiteflies (other than bandedwinged whitefly)	1.1

#### **Notes and Restrictions**

Pre-Harvest Interval (PHI): 14 days

Minimum interval between applications: 7 days

Maximum PROVADO<sup>®</sup> allowed per crop season: 7 ounces/Acre (0.31 lb Al/A)

Do not graze treated fields after any application of PROVADO®

PROVADO® may be applied through properly calibrated ground, aerial or chemigation application equipment

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Iank	MIX	Recommendations

Pests Controlled (in addition to pests listed above)	PROVADO® 70 WG Rate ounces/Acre	Bidrin <sup>®</sup> 8* Rate fluid ounces/Acre
For early season control of: Thrips	0.7 – 1.1	1.6 – 3.2
For mid to late season control of: Plant bugs Stink bugs (including Brown stink bug) Grasshoppers Saltmarsh caterpillar Cotton leafperforator	0.7 – 1.1	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.

## **POTATO**

Pests Controlled	Rate ounces/Acre
Aphids	
Colorado potato beetle	
Flea beetles	7 1.1
Leafhoppers	
Psyllids	

## **Notes and Restrictions**

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 7 days

Maximum PROVADO® allowed per crop season: 4.6 ounces/Acre (0.2 lb Al/A)

## **TOBACCO**

Pests Controlled	Rate ounces/Acre
Aphids .	0.6 - 1.2
Flea beetles Japanese beetle	1.2

## **Notes and Restrictions**

Pre-Harvest Interval (PHI): 14 days

Minimum interval between applications: 7 days

Maximum PROVADO® allowed per crop season: 6.4 ounces/Acre (0.28 lb Al/A)

## **VEGETABLE and SMALL FRUIT CROPS**

Recommended Applications - PROVADO\*70 WG

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 (<u>www epa gov</u>) for latest crop groups.

## FRUITING VEGETABLES1

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

Pests Controlled	Rate ounces/Acre
Aphids	Ounces/Acre
Colorado potato beetle	44.40
Leafhoppers	1.1 – 1.8
Whiteflies	
Pepper weevil (Pepper only)	1.8

#### Notes and Restrictions

Pre-Harvest Interval (PHI): 0 day

Minimum interval between applications: 5 days

Maximum PROVADO<sup>®</sup> allowed per crop season: 5.5 ounces/Acre (0.24 lb Al/A)

## **Applications**

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.

Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

## **GLOBE ARTICHOKE**

Pests Controlled	Rate ounces/Acre	
Aphids	11 20	
Leafhoppers	1.1 – 2.9	

## **Notes and Restrictions**

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 14 days

Maximum PROVADO® allowed per crop season: 11.5 ounces/Acre (0.5 lb Al/A)

## HEAD and STEM BRASSICA VEGETABLES $^{ u}$

Crops of Crop Group 5: 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,

## **LEAFY GREEN VEGETABLES 17**

Crops of Crop Group 4A: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Requette), 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. Applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland)

Pests Controlled	Rate ounces/Acre
Aphids	
Flea beetles	1.1
Leafhoppers	1.1
Whiteflies	

#### **Notes and Restrictions**

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 5 days

Maximum PROVADO® allowed per crop season: 5.5 ounces/Acre (0.24 lb Al/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.

 $^{\prime\prime}$  Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

## LEGUME VEGETABLES 1/

Crops of Crop Group 6 (except soybean, dry);

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-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 ounces/Acre
Aphids	
Leafhoppers	1.0
Whiteflies	

#### **Notes and Restrictions**

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 7 days

Maximum PROVADO® allowed per crop season: 3.0 ounces/Acre (0.13 lb Al/A)

<sup>17</sup> Not for use on crops grown for seed crops unless allowed by state-specific supplemental labeling.

## ROOT, TUBEROUS and CORM VEGETABLES $^{\prime\prime}$

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

(For recommended applications on Potato see Field Crops section)

Pests Controlled	Rate ounces/Acre
Aphids	
Flea beetles	1.0
Leafhoppers	1.0
Whiteflies	

#### **Notes and Restrictions**

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 5 days

Maximum PROVADO® allowed per crop season: 1.0 ounces/Acre (0.044 lb Al/A) on Radish; 3.0 ounces/Acre (0.13 lb Al/A) on other crops

Maximum PROVADO® applications per crop season: 1 on Radish; 3 on other crops.

<sup>2/</sup> Tops or greens from these crops may be utilized for food or feed.

## **STRAWBERRY**

Pests Controlled	Rate ounces/Acre
Aphids	
Spittlebugs	1.1
Whiteflies	

## Notes and Restrictions

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 5 days

Maximum PROVADO® allowed per crop season: 3.3 ounces/Acre (0.14 lb Al/A)

Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

<sup>&</sup>lt;sup>1/</sup> Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

## TREE, BUSH and VINE CROPS

Recommended Applications - PROVADO® 70 WG

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 (<u>www.epa.gov</u>) for latest crop groups.

## **BUSHBERRY**

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

Pests Controlled	Rate ounces/Acre
Aphids	0.9 – 1.2
Leafhoppers/Sharpshooters	0.9 - 1.2
Blueberry maggot	
Japanese beetle (adults)	1.7 – 2.3
Thrips	

## Notes and Restrictions

Pre-Harvest Interval (PHI): 3 days

Minimum interval between applications: 7 days

Maximum PROVADO® allowed per crop season: 11.4 ounces/Acre (0.5 lb Al/A)

Maximum number of PROVADO® applications per crop season: **5**Minimum application volume (water): 20 GPA – ground, 5 GPA – aerial.

Do not apply pre-bloom or during bloom or when bees are actively foraging.

### **CITRUS**

Crops of Crop Group 10: 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 cutivars and/or hybrids of these

Pests Controlled	Rate ounces/Acre
Aphids Asian citrus psyllid	
Blackfly	
Leafhoppers / Sharpshooters	2.9 – 5.7
Leafminers	(depending on tree size
Mealybugs	target pest and infestation pressure)
Scales	
Whiteflies	
Pests Suppressed	
Thrips	2.9 – 5.7
Notes and Restrictions	

#### Notes and Restrictions

Pre-Harvest Interval (PHI): 0 day

Minimum interval between applications: 10 days

Maximum PROVADO® allowed per crop season: 11.4 ounces/Acre (0.5 lb Al/A)

Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

## **Applications**

Scales - time applications to the crawler stage. Treat each generation.

## **GRAPE**

American bunch grape, Muscadine grape and Vinifera grape.

Pests Controlled	Rate ounces/Acre
Leafhoppers / Sharpshooters	0.9 – 1.1
Mealybugs	0.0
Grapeleaf skeletonizer 1/	1.1

#### **Notes and Restrictions**

Pre-Harvest Interval (PHI): 0 day

Minimum interval between applications: 14 days

Maximum PROVADO <sup>®</sup> allowed per crop season: 2.2 ounces/Acre (0.1 lb Al/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 ounces/Acre
Aphids	2.3
Notes and Restrictions	

Pre-Harvest Interval (PHI): 28 days

Minimum interval between applications: 21 days

Maximum PROVADO® allowed per crop season: 6.9 ounces/Acre (0.3 lb Al/A)

## PECAN 1/

Pests Controlled	Rate ounces/Acre
Aphids (use higher rate for Black pecan aphid)	
Phylloxera spp.	1.0 – 2.0
Spittlebugs	

## Notes and Restrictions

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 10 days

Maximum PROVADO® allowed per crop season: 8.0 ounces/Acre (0.35 lb Al/A)

<sup>1/1</sup> Use not permitted in California unless otherwise directed by supplemental labeling

#### POME FRUIT

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

Pests Controlled	Rate ounces/Acre
Leafhoppers	1.3 – 2.3
Aphids (except woolly apple aphid)	-
Leafminers	2.3
San Jose scale	
FOR PEAR, ONLY	
Mealybugs	5.7
Pear psylla	

## Notes and Restrictions

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 10 days

Maximum PROVADO® allowed per crop season: 11.5 ounces/Acre (0.5 lb Al/A)

Do not apply pre-bloom or during bloom or when bees are actively foraging

#### **Applications**

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 size 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.

STONE FRUIT

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

Japanese). Plumcot. Prune (fresh and dried).

Pests Controlled	Rate ounces/Acre
Aphids	-
Green June beetle	
Japanese beetle	
Leafhoppers / Sharpshooters	1.2 - 2.3
Piant bugs	
Rose chafer	
San Jose scale	
Cherry fruit fly	1.7 - 2.3
Pests Suppressed	
Plum curculio	2.3
Stink bugs	2.3

## Notes and Restrictions for Apricot, Nectarine, Peach

Pre-Harvest Interval (PHI): 0 day

Minimum interval between applications: 7 days

Maximum PROVADO® allowed per crop season: 6.9 ounces/Acre (0.3 lb Al/A)

Minimum application volume (water): 50 GPA - ground; 25 GPA - aerial.

Do not apply pre-bloom or during bloom or when bees are actively foraging.

#### Notes and Restrictions for Cherries, Plums, Plumcot, Prune

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 10 days

Maximum PROVADO® allowed per crop season: 11.5 ounces/Acre (0.5 lb Al/A)

Minimum application volume (water): 50 GPA – ground; 25 GPA – aerial.

Do not apply pre—bloom or during bloom or when bees are actively foraging.

## TROPICAL FRUIT

Acerola, Avocado, Canistel, Feijoa, Jaboticaba, Guava, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon,

Pulasan, Rambutan, Sapodilla, Sapote (black), Spanish lime, Star apple, Starfruit, Wax jambu

Pests Controlled	Rate ounces/Acre
Aphids	•
Leafhoppers / Sharpshooters	
Thrips	2.3
Whiteflies	
Pests Suppressed	
Scales	2.3
Notes and Destrictions	

#### **Notes and Restrictions**

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 10 days

Maximum PROVADO® allowed per crop season: 11.5 ounces/Acre (0.5 lb Al/A)

Maximum number PROVADO® applications per crop season: 5

Do not apply pre-bloom or during bloom or when bees are actively foraging.

## **OTHER CROPS**

## Recommended Applications - PROVADO 70 WG

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 1/

Including members of the genus Populus grown for pulp or timber

Pests Controlled	Rate ounces/Acre
Aphids Leaf beetles	1.2 – 2.3

## **Notes and Restrictions**

Minimum interval between applications: 10 days

Maximum PROVADO® allowed per crop season: 11.5 ounces/Acre (0.5 lb Al/A)

Do not apply pre-bloom or during bloom or when bees are actively foraging

<sup>1/2</sup> Use not permitted in California unless otherwise directed by supplemental labeling.

#### **CHRISTMAS TREE**

Pests Controlled	Rate ounces/Acre
Aphids	
Adelgids	1.2 – 2.3
Sawflies	

#### **Notes and Restrictions**

Minimum interval between applications: 7 days

Maximum PROVADO® allowed per crop season: 11.5 ounces/Acre (0.5 lb Al/A)

#### Applications

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.

## **IMPORTANT: READ BEFORE USE**

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