

74530-39

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1/20



U.S. ENVIRONMENTAL PROTECTION AGENCY  
 Office of Pesticide Programs  
 Registration Division (H7505P)  
 1200 Pennsylvania Avenue NW  
 Washington, D.C. 20460

EPA Reg. Number:  
 74530-39

Date of Issuance:  
 Sep 02 2008

Term of Issuance: **Conditional**

Name of Pesticide Product  
 Heloprid 2 Ag Insecticide

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):  
 Mr. Marshall B. Wixson  
 Helm Agro USA, Inc.  
 8295 Tournament Drive, Suite # 310  
 Burr Ridge, IL 60527

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.  
 Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A). Once a pesticide is registered, however, it is not regarded as permanently acceptable. Registration does not eliminate the need for continual reassessment of pesticides. If the Agency determines that, at any time, additional data are required to maintain in effect an existing registration, the Agency will require submission of such data under FIFRA section (3)(c)(2)(B).

1. Revise the EPA Registration Number to read, EPA Reg. No. "74530-39".

Signature of Approving Official:

*Venus Eagle*

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

Date:

SEP 02 2008

2. Submit two copies of your final printed label before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitute acceptance of these conditions.

A stamped copy of the label is enclosed for your records. If you have any questions regarding this notice contact Dani Daniel at 703 305-5409.

3/20

# HELOPRID 2 AG INSECTICIDE

***For uses in pest management and suppression of insect vectored diseases and maintenance of plant health.***

**ACTIVE INGREDIENT:**

Imidacloprid:  
1-[(6-Chloro-3-pyridinyl)methyl]N-nitro-2-imidazolidinimine ..... 21.4%

**OTHER INGREDIENTS:** ..... 78.6%

**TOTAL:**..... 100.0%

Contains 2 pounds of imidacloprid per gallon.

EPA Reg. No. 74530-  
EPA Est. No.  
NET Contents: 1 gallon

Manufactured for:  
Helm Agro US, INC.  
8295 Tournament Drive Suite #310  
Memphis, TN 38125

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**ACCEPTED**  
**SEP 02 2008**  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
Registered under  
EPA Reg. No. 74530-39

**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.
  - Do not induce vomiting unless told to do so by a poison control center or doctor.
  - Do not give anything by mouth to an unconscious person.

- IF IN EYES:**
- 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.
  - Call a poison control center or doctor for treatment advice.

- IF ON SKIN OR CLOTHING:**
- Take off contaminated clothing.
  - Rinse skin immediately with plenty of water for 15 to 20 minutes.
  - Call a poison control center or doctor for treatment advice.

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

Emergency response telephone number: 303-623-5716

**NOTE TO PHYSICIAN: No specific antidote is available. Treat the patient symptomatically. See inside booklet for additional PRECAUTIONARY STATEMENTS.**

**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, polyvinyl chloride (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.

TAKE 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.**

### 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, make applications to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection.

### 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 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.

### 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.

### No-Spray Zone Requirements for Soil Applications

Do not apply within 25 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 using HELOPRID 2 AG on erodible soils, employ the best management practices for minimizing runoff. Consult your local Natural Resources Conservation Service for instructions in your 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.

6/20

## Resistance Management

Some insects have developed resistance to imidacloprid after repeated use. Users should incorporate resistance management practices such as rotating classes of insecticides when possible.

Insect species that have acquired a tolerance to imidacloprid and other neonicotinoid (Group 4A) insecticides may become dominant if Group 4A are used repeatedly to control targeted species. This can eventually result in the loss of this class of insecticides as a viable control.

Do not make more than three consecutive applications of HELOPRID 2 AG and/or other Group 4A neonicotinoid class products having a similar mode of action. Following a neonicotinoid series of treatments, HELM AGRO US, INC. recommends rotating applications with other products that control target species with a different mode of action before making more applications of neonicotinoid products. Using a rotation of insecticide classes approach, along with other IPM practices, is an effective strategy for minimizing insect pest's resistance to this class of chemistry.

Soil applications of neonicotinoid class insecticides to crops should be factored into the resistance management plans for foliar applications to the crops. Other Group 4A, neonicotinoid products labeled for foliar treatments include: Actara, Assail, Calypso®, Centric, Intruder, Leverage® and Trimax®. Other 4A Group, neonicotinoid products used as soil treatment include: Admire® and Platinum.

Additional information on insect resistance management can be obtained from your local extension specialist, certified crop advisor, product manufacturer or 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.

### 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. **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, polyvinyl chloride (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.

### CONTAINER DISPOSAL STATEMENTS

**Nonrefillable Containers:** Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying.

**Nonrefillable container equal to or less than 5 gallons:** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

### APPLICATION INSTRUCTIONS

**Direct applications of HELOPRID 2 AG into the seed or root-zone of crop.**

Lack of correct application of HELOPRID 2 AG into seed or root-zone could result in lessened or delayed efficacy. HELOPRID 2 AG may be applied with ground or chemigation application. Do not apply with aerial application equipment. Broadcast, foliar applications are only recommended to seedling flats or trays, or where product is intended to be washed from foliage to soil prior to drying on foliage.

Best results of HELOPRID 2 AG application are achieved when applications are made to the root-zone of plants. Earlier application of HELOPRID 2 AG to developing plant results in earlier protection. HELOPRID 2 AG is a systemic insecticide and moves from the plant's root system to the upper vegetative parts via the xylem tissue. This movement results in extended activity of HELOPRID 2 AG, to control insects that can vector detrimental virus transmission. Higher rates should be made when insecticide pressure occurs later in the plants development cycle or when insect pressure is heavy and/or continuous. Despite the systemic nature of HELOPRID 2 AG, it usually does not control insects that infest flowers, blooms or fruit. Insects attacking these parts of a plant generally require a foliar type insecticide application. More specific HELOPRID 2 AG application rates are provided in the crop-specific sections of this label.

Suppression, or less than complete control of certain diseases and insect pests including reduced feeding may also result from a HELOPRID 2 AG application. Complete control of these pests/diseases may require supplemental control measures.

HELOPRID 2 AG 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. Extreme care should be taken to minimize exposure of HELOPRID 2 AG to honey bees and other beneficial pollinators. Contact your local Cooperative Extension Service, PCAs, consultants or local HELM AGRO US, INC. representative for application on these type crops.

HELOPRID 2 AG should be pre-mixed with water or other appropriate diluents prior to application. Maintain constant agitation to avoid settling.

8/20  
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 Rates" section for a given crop.

## MIXING INSTRUCTIONS

- 1 Add 50% of the required amount of water to the spray tank.
- 2 Begin agitation.
- 3 Add labeled rate of HELOPRID 2 AG.
- 4 Add balance of water needed. Maintain sufficient agitation during both mixing and application. HELOPRID 2 AG may be tank mixed with other pesticides and/or fertilizer solutions. Refer to "Compatibility Note" below. When tank mixing HELOPRID 2 AG with other pesticides, prepare the tank mixture as instructed above and follow suggested "Mixing Order" below.

### Mixing Order for Tank Mixes

- 1 Wettable powders
- 2 HELOPRID 2 AG,
- 3 Emulsifiable concentrates

Maintain good agitation as each pesticide is added. Do not add the next product 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

Unless the applicator has prior knowledge of the compatibility of the intended tank mixture, HELM AGRO US, INC. recommends a small scale test by adding proportionate amounts of each ingredient in the appropriate order, to a clear pint or quart sized jar. Cap and shake for 5 minutes, then let set for 5 minutes. Any visual indication of poor mixing or formation of precipitates that cannot be easily re-dispersed indicates incompatibility and the mixture should not be used.

## USE IN CHEMIGATION SYSTEMS

**Types of Irrigation Systems:** Chemigation applications of HELOPRID 2 AG may only be made to crops through chemigation systems as specified in crop-specific application sections and only through low-pressure irrigation systems unless specified for a given crop. Do not apply HELOPRID 2 AG through any other type of irrigation system.

**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, there is a 12 month plant back.

<u>PLANTBACK INTERVAL</u>	<u>COMMENT</u>
Immediate Plant-back:	Any crop listed on this label plus the following crops not on this label: barley, canola, corn (field, sweet and pop), mustard seed, rapeseed, sorghum, and wheat.
30-Day Plant-back:	Cereals (including buckwheat, millet, oats, rice, rye and triticale), soybeans, safflower
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

To control Aphids, Plant bugs, Thrips and Whiteflies apply 1.3 fluid ounces per 1,000 row feet. Equivalent to 17.0 to 21.1 fluid ounces per acre depending on row spacing.

Apply label rate of HELOPRID 2 AG in one of the following methods:

1. In-furrow spray during planting directed on or below seed;
2. In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting;
3. Chemigation into root-zone through low-pressure drip or trickle irrigation.

#### Notes and Restrictions for Cotton:

- Maximum HELOPRID 2 AG allowed per crop season: 21.1 fluid ounces/Acre (0.33 lb. ai/Acre)
- Apply no more than 0.5 lbs. active ingredient of imidacloprid per acre per season including seed treatment, soil and foliar uses.

- Do not apply more than a total of 6 applications of the active ingredient per season.
- Do not graze treated fields after any application of HELOPRID 2 AG.

10/20

Please see "Resistance Management" section of this label.

## POTATO

To control Aphids, Colorado potato beetle, Flea beetles, Potato psyllid, and Leafhoppers, apply 0.9 to 1.3 fluid ounces per 1,000 row feet. Equivalent to 13.0 to 20.0 fluid ounces per acre depending on row spacing. To suppress wireworms or in response to symptoms of Potato leaf roll virus (PLRV), Potato yellows, or Net necrosis (PLRV) apply 0.9 to 1.3 fluid ounces per 1,000 row feet. Equivalent to 13.0 to 20.0 fluid ounces per acre depending on row spacing.

### SOIL APPLICATION

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. In-furrow spray during planting directed on the seed pieces or seed potatoes;
2. Subsurface side-dress on both sides of the row covered with 3 or more inches of soil;
3. Narrow band spray at ground cracking directly over the row during hilling covered with 3 or more inches of soil;
4. In the bedding operation (7 days or less) before planting, apply a narrow band directly below the eventual seed row. To be effective applications must be placed below soil-surface and in contact with seed piece or within root-zone. For potatoes grown on highly permeable soils with shallow water table, at-plant applications of HELOPRID 2 AG may be made in a 2-to 4-inch band (width of planter shoe opening) and completely covered.

### POTATO (Seed Piece Treatment)\*

To control Aphids, Colorado potato beetle, Flea beetles, Leafhoppers, Potato Psyllids, and Wireworms apply 0.4 to 0.8 fluid ounces per 1,000 row feet. Equivalent to 8.0 to 16.0 fluid ounces per acre depending on row spacing. (Based on a seeding rate of 2,000 lbs./acre)

In response to symptoms of Potato leaf roll virus (PLRV), Potato yellows, or Net necrosis (PLRV) apply 0.8 fluid ounces per 1,000 row feet. Equivalent to 16.0 fluid ounces per acre depending on row spacing. Apply specified dosage as a diluted spray onto seed-pieces using a shielded spray system. Dilute with 3 parts water, or less, to 1 part HELOPRID 2 AG. Maintain agitation during application. Fungicidal dust treatments may be applied after a HELOPRID 2 AG application. Application should only be made in areas with adequate ventilation. Plant seed-pieces as soon as possible after treating. Seed-pieces treated with HELOPRID 2 AG should not be exposed to sunlight.

### Notes and Restrictions for Potato Seed Piece Treatment:

- Maximum HELOPRID 2 AG allowed per crop season: 20.0 fluid ounces/Acre (0.31 lbs ai/Acre)
- Do not use treated seed-pieces for food, feed, or fodder.
- Do not apply any subsequent application of HELOPRID 2 AG or any other imidacloprid based product (in-furrow), following a HELOPRID 2 AG seed-piece treatment.

\*Use not permitted in CA unless otherwise directed by supplemental labeling.

## TOBACCO

To control Mole Crickets, Whiteflies and Wireworms apply 1.4 to 2.8 fluid ounces per 1,000 plants as seedling tray drench or 1.8 to 2.8 fluid ounces per 1,000 plants as an in-furrow or transplant water.

To suppress cutworms or in response to symptoms of Tomato spotted wilt virus (TSWV) apply 1.4 to 2.8 fluid ounces per 1,000 plants as seedling tray drench or 1.8 to 2.8 fluid ounces per 1,000 plants as an in-furrow or transplant water.

Apply specified dosage of HEOPRID 2 AG in one of the following methods:

1. Broadcast foliar spray to seedlings in trays (tray drench) not more than 7 days prior to transplanting. Follow as soon as possible with overhead irrigation to wash HELOPRID 2 AG from foliage into potting media. Failure to wash HELOPRID 2 AG from foliage may result in a reduction in pest control. Handle transplants carefully during setting to avoid dislodging treated potting media from roots.
2. In-furrow spray or transplant-water drench during setting.
3. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**Note:** Proper drench applications to plants in trays with HELOPRID 2 AG are generally the best method of application. However, the specified rate of HELOPRID 2 AG may be applied as combination of the tray drench in the planthouse and/or transplant-water drench in field. Adverse growing conditions may cause a delay in uptake of HELOPRID 2 AG into the plant and a delay in control.

To control Aphids and Flea beetles apply 1.0 fluid ounce per 1,000 plants as seedling tray drench or 1.4 fluid ounces per 1,000 plants as an in-furrow or transplant water.

11/20

#### Notes and Restrictions for Tobacco:

- Pre-Harvest Interval (PHI): 14 days
- Maximum HELOPRID 2 AG allowed per crop season is 32.0 fluid ounces/Acre (0.50 lbs ai/acre)

## VEGETABLE AND SMALL FRUIT CROPS

### CUCURBIT VEGETABLES\*

Including: Chayote (fruit), Chinese waxgourd, (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourds (edible, includes hyotan, cucuzza, hechima, Chinese okra), *Momordica spp.* (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of Cucumis melon including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon and Winter melon), Pumpkin, Squash (includes summer squash types such as: butternut squash, calabaza, crookneck squash, Hub- bard squash, scallop squash, straightneck squash, vegetable marrow and zucchini, and winter squash types such as acorn squash and spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*)

To control Aphids, Cucumber beetles, Leafhoppers, Thrips (Foliar-feeding thrips only) and Whiteflies apply 16.0 to 24.0 fluid ounces per acre.

For suppression in response to Bacterial wilt (as vectored by various cucumber beetles Leaf silvering resulting from whitefly feeding apply 16.0 to 24.0 fluid ounces per acre.

Apply specific dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. In-furrow spray directed on or below seed.
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours of application.
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
5. Post-seeding drench, transplant-water drench or hill drench.
6. Subsurface side-dress on both sides of each row. HELOPRID 2 AG must be incorporated into root-zone.

#### Notes and Restrictions for Cucurbit Vegetables:

- Preharvest Interval (PHI): 21 days
- Maximum HELOPRID 2 AG allowed per application: 24.0 fluid ounces/Acre (0.38 lbs ai/Acre)

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

### CUCURBIT VEGETABLES (Planthouse Application)\*

To control Aphids and Whiteflies apply 0.1 fluid ounce per 1,000 plants.

Apply specified dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following manners:

1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash HELOPRID 2 AG from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash HELOPRID 2 AG from foliage may result in reduced pest control.
2. Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray. The application made in the planthouse will only provide short-term protection and is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. Transplants should be handled carefully during setting to avoid dislodging treated potting media from roots.

**Important Note:** Not all varieties of fruiting vegetables have been tested for tolerance to HELOPRID 2 AG applied to seedling flats. It is therefore recommended to treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

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

**GREENHOUSE VEGETABLES\* (mature plants in production greenhouses)****Cucumber, Tomato Only**

To control Aphids and Whiteflies apply 1.4 fluid ounces per 1,000 plants.

Apply specified dosage in a minimum of 16 gallons of water for tomatoes and 21 gallons of water for cucumbers using soil drenches, micro-irrigation, drip irrigation, or hand-held or motorized calibrated irrigation equipment. Do not apply to immature plants since phytotoxicity may occur. Applications should be made when infestation pressure surpasses threshold and beneficials are not able to maintain pest populations below damage thresholds. Repellency of bumble bee pollinators and negative effects on some beneficial (*Onus sp.*) can occur when HELOPRID 2 AG is applied.

Many varieties of vegetables have been tested for tolerance to HELOPRID 2 AG and show good safety. However, certain varieties may show more sensitivity to HELOPRID 2 AG. Therefore, treatment of a few plants is recommended before treating the whole greenhouse.

**Notes and Restrictions for Greenhouse Vegetables:**

- Pre-Harvest Interval (PHI): 0 days
- Maximum number HELOPRID 2 AG applications per crop season: 1

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

**FRUITING VEGETABLES\***

Including: Eggplant, Ground Cherry, Okra, Pepper (Including Bell peppers, Chili peppers, Cooking peppers, Pimentos and Sweet peppers), Tomato, Pepinos, Tomatillo

To control Aphids, Colorado potato beetle, Flea beetles, Leafhoppers, Thrips (Foliar-feeding thrips only) and Whiteflies apply 16.0 to 24.0 fluid ounces per acre. For Okra and Pepper apply 16.0 to 32.0 fluid ounces per acre. For suppression in response to symptoms of Tomato mottle virus, Tomato spotted wilt virus, Tomato yellow leaf curl virus apply 16.0 to 24.0 fluid ounces per acre. For Okra and Pepper apply 16.0 to 32.0 fluid ounces per acre.

Apply specific dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment
2. In-furrow spray directed on or below seed.
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours of application.
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting
5. Post-seeding drench, transplant-water drench, or hill drench.
6. Subsurface side-dress on both sides of each row. HELOPRID 2 AG must be incorporated into root-zone.

**Notes and Restrictions for Fruiting Vegetables:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum HELOPRID 2 AG allowed on pepper and okra crops per application: 32.0 fluid ounces/Acre (0.50 lbs ai/acre)
- Maximum HELOPRID 2 AG allowed on other fruiting vegetable crops per application: 24.0 fluid ounces/Acre (0.38 lbs ai/Acre)

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

**FRUITING VEGETABLES (Planthouse application)\***

To control Aphids and Whiteflies apply 0.1 fluid ounce per 1,000 plants.

Apply specified dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following manners:

1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash HELOPRID 2 AG from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash HELOPRID 2 AG from foliage may result in reduced pest control.
2. Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray. The application made in the planthouse will only

provide short-term protection and is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. Transplants should be handled carefully during setting to avoid dislodging treated potting media from roots.

13/20

**Notes and Restrictions for Fruiting Vegetable Planthouse Application:**

- Maximum amount HELOPRID 2 AG applied in the planthouse: 0.1 fluid ounces (0.00156 lbs ai)/1,000 Plants
- Maximum number HELOPRID 2 AG applications in planthouse: 1 \*Not permitted in California unless otherwise specified by supplemental labeling. **Important Note:** Not all varieties of fruiting vegetables have been tested for tolerance to HELOPRID 2 AG applied to seedling flats. It is therefore recommended to treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

\*Use not permitted in CA unless otherwise directed by supplemental labeling.

**HEAD and STEM BRASSICA VEGETABLES\***

Including: Broccoli, Broccoli raab (rapini), Brussels sprouts, Cabbage, Cauliflower, Cavalo 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 (leaves)

**LEAFY VEGETABLES\***

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), Raddicchio (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)

To control Aphids and Whiteflies apply 10.0 to 24.0 fluid ounces per acre (based on 36-inch row spacing).

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. In-furrow spray directed on or below seed.
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours of application.
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
5. Post-seeding drench, transplant-water drench or hill drench.
6. Subsurface side-dress on both sides of each row. HELOPRID 2 AG must be incorporated into root-zone.

**Notes and Restrictions for Head and Stem Vegetables and Leafy Vegetables:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum HELOPRID 2 AG allowed per application: 24.0 fluid ounces/Acre (0.38 lbs ai/Acre)

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

**LEAFY PETIOLE VEGETABLES\***

Including: Cardoon, Celery, Chinese celery (fresh leaves and stalk only), Celtuce, Florence fennel including sweet anise, sweet fennel, Finocchio), Rhubarb, Swiss chard

To control Aphids, Leafhoppers, Whiteflies apply 10.0 to 24.0 fluid ounces per acre.

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. In-furrow spray directed on or below seed.
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours of application.
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting
5. Post-seeding drench, transplant-water drench or hill drench.
6. Subsurface side-dress on both sides of each row. HELOPRID 2 AG must be incorporated into root-zone.

**Notes and Restrictions for Leafy Petiole Vegetables:**

- Pre-Harvest Interval (PHI): 45 days
- Maximum HELOPRID 2 AG allowed per application: 24.0 fluid ounces/Acre (0.38 lbs ai/Acre)

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

**LEGUME VEGETABLES\* (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-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}

To control Aphids, Leafhoppers, Thrips (foliar feeding only), Whiteflies apply 16.0 to 24.0 fluid ounces per acre. For suppression in response to symptoms of Bean common mosaic virus (BCMV), Bean golden mosaic virus (BGMV), Beet curly top hybrigeminivirus (BCTV) apply 16.0 to 24.0 fluid ounces per acre.

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. In-furrow spray at planting directed on or below seed.
3. In a narrow (2" or less) surface band over seed-line during planting incorporated into a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours following application.
4. In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting.
5. As a post-seeding drench, transplant drench, or hill drench.

**Notes and Restrictions for Legume Vegetables:**

- Preharvest Interval (PHI): 21 days
- Maximum HELOPRID 2 AG allowed per crop season: 24.0 fluid ounces/Acre (0.38 lbs ai/Acre)

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

**ROOT VEGETABLES\***

Including: Beet (garden)\*\*, Carrot\*\*, Burdock (edible)\*\*, Celeriac\*\*, Chervil (turnip-rooted)\*\*, Chicory\*\*, Ginseng, Horseradish, Parsley (turnip-rooted), Parsnip\*\*, Radish\*\*, Oriental radish (diakon)\*\*, Rutabaga\*\*, Salsify (oyster plant), Salsify (black)\*\*, Salsify (Spanish), Skirret, Turnip\*\*

To control Aphids, Flea beetles, Leafhoppers and Whiteflies apply 0.7 to 1.7 fluid ounces per 1,000 row feet. Equivalent to 10.0 to 24.0 fluid ounces per acre depending on row spacing.

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. In-furrow spray (rate specified per 1,000 row-feet) or, shanked-in 1 to 2 inches below seed depth during planting;
3. In a narrow (2 inches or less) band directly (1 to 2 inches) below the eventual seed row in a bedding operation 14 or fewer days before planting.

**Important Note:** Rate applied affects the length of control. Use higher rates where infestations occur later in crop development, or where pest pressure is continuous. HELOPRID 2 AG rates less than 0.7 fluid ounces/1,000 row-feet will not provide adequate residual pest control. HELOPRID 2 AG treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

**Notes and Restrictions for Root Vegetables:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum HELOPRID 2 AG allowed per crop season: 24.0 fluid ounces/Acre (0.38 lbs. ai/Acre)
- Maximum HELOPRID 2 AG applications per crop season: 1

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

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

15/20

## **TUBEROUS AND CORM VEGETABLES\***

Including: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Canna (edible, Queensland arrowroot), Casava (bitter and sweet)\*\*, Chayote (root), Chufa, Dasheen (taro)\*\*, Ginger, Leren, Sweet potato, Tanier (cocoyam)\*\*, Tumeric, Yam bean (jicama, manioc pea), Yam (true)\*\*

(For applications on potato see "Field Crop" section.)

To control Aphids, Flea beetles, Leafhoppers and Whiteflies apply 0.7 to 1.7 fluid ounces per 1,000 row feet. Equivalent to 10.0 to 24.0 fluid ounces per acre depending on row spacing.

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. In-furrow spray (rate specified per 1,000 row-feet) over planting material (hulis) or shanked-in 1 to 2 inches below hulis depth at planting;
2. Side-dress not more than 0.6 fluid ounces/1,000 row-feet no later than 45 days after-planting. Observe same PHI as above.

**Note:** Rate applied affects the length of control. Use higher rates where infestations occur later in crop development, or where pest pressure is heavy or continuous. HELOPRID 2 AG rates less than 0.7 fluid ounces/1,000 row-feet will not provide adequate residual pest control. HELOPRID 2 AG treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

### **Notes and Restrictions for Tuberous and Corm Vegetables:**

1. Pre-Harvest Interval (PHI) from planting application: 3 days (leaves); 125 days (corms)
2. Maximum HELOPRID 2 AG allowed per crop season: 24.0 fluid ounces/Acre (0.38 lbs. ai/Acre)
3. Maximum HELOPRID 2 AG applications per crop season: 1

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

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

## **STRAWBERRY (annual and perennial crops)\*,\*\***

To control Aphids and Whiteflies apply 24.0 to 32.0 fluid ounces per acre.

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low pressure drip, trickle, micro-sprinkler or equivalent equipment after plants are established or on perennial crops in early spring prior to bud opening.
2. As a plant material or plant hole treatment just prior to, or during transplant.

The rate applied affects the length of control. Use higher rates where infestations may occur later in crop development or where pest pressure is continuous.

### **Notes and Restrictions for Strawberries (annual and perennial crops)**

- Pre-Harvest Interval (PHI): 14 days
- Maximum HELOPRID 2 AG allowed per crop season: 32.0 fluid ounces/Acre (0.50 lbs. ai/Acre)

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

\*\*Do not use both application methods on the same crop in the same season.

## **STRAWBERRY (Post-Harvest Use on Perennial Crops)\*,\*\***

To control White grub complex (grubs of Asiatic garden beetle, European and Masked Chafer, Japanese beetle, Oriental beetle) apply 16.0 – 24.0 fluid ounces per acre.

Apply a single application post harvest to coincide with renovation of strawberry fields and during active egg-laying period of beetles. Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. As a ground spray via boom or backpack sprayer in a minimum of 20 gallons of water per acre.
2. As a row-band spray using an adjusted amount of product based on the treated row band area in proportion to the amount required per full acre. The bandwidth must be equivalent to the width of the anticipated fruiting bed.
3. As a chemigation application with 600 to 1,000 gallons of water followed by 0.10 to 0.25 inches irrigation.

**Important Note:** All soil-surface applications must be followed by 0.25 inches of rainfall or overhead irrigation water per acre within 2 hours of application. Failure to adequately incorporate HELOPRID 2 AG into egg-deposition zone may result in decreased activity of beetle grubs.

**Notes and Restrictions for Strawberry Post-Harvest use on Perennial Crops:**

- Pre-Harvest Interval (PHI): 14 days
- Maximum HELOPRID 2 AG allowed preseason: 24.0 fluid ounces/Acre (0.38 lbs. ai/Acre)

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

\*\*Do not use both application methods on the same crop in the same season.

**SUGARBEET\* (For use only in CA)**

To control Aphids, Leafhoppers, Whiteflies and Flea beetles apply 6.0 to 12.0 fluid ounces per acre.

For suppression in response to symptoms of Western yellows/Beet curly top hybrigeminivirus (BCTV) apply 6.0 to 12.0 fluid ounces per acre.

Apply specified dosage of HELOPRID 2 AG in the following method:

1. Apply specified dosage in sufficient carrier volume to insure uniform application. Apply directly below each seed furrow either during the bedding operation immediately prior to planting or at the time of planting.

The low rate may be applied to aid establishment of stands in whitefly areas, or for early season control of other pests listed.

**Notes and Restrictions for Sugarbeets:**

- Maximum HELOPRID 2 AG allowed per crop season: 12.0 fluid ounces/Acre (0.18 lbs. ai/acre)
- Maximum imidacloprid allowed per season: 0.18 lb ai/acre (from any formulation) on any row spacing

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

CONVERSION CHART FOR LINEAR APPLICATION RATE								
RATE Fluid ounces/Acre	Fluid ounces/Acre Rate in Fluid Ounces/1,000 Row Feet Based On Average Row Spacing (in inches):							
	10	15	20	25	30	35	40	45
10	.19	.29	.38	.48	.57	.67	.76	.86
12	.23	.34	.46	.57	.69	.80	.92	1.03
14	.27	.40	.54	.67	.80	.94	1.07	1.21
16	.31	.46	.61	.77	.92	1.07	1.22	1.38
18	.34	.52	.69	.86	1.03	1.21	1.38	1.55
20	.38	.57	.76	.96	1.15	1.34	1.53	1.72
22	.42	.63	.84	1.05	1.26	1.47	1.68	1.89
24	.46	.69	.92	1.15	1.38	1.61	1.84	2.07
26	.50	.75	.99	1.24	1.49	1.74	1.99	2.24
28	.54	.80	1.07	1.34	1.61	1.87	2.14	2.41
30	.57	.86	1.15	1.43	1.72	2.01	2.29	2.58
32	.61	.92	1.22	1.52	1.84	2.14	2.45	2.75

**Important Note:** The HELOPRID 2 AG rate applied affects the length of control and the degree of control. Row-spacing X HELOPRID 2 AG rate combinations in shaded blocks may not provide and are not recommended for long-term, residual control. Use higher rates where pest pressure may occur later in



crop development or where pest pressure is severe or continuous. HELM AGRO US, INC. offers no warranty for use of HELOPRID 2 AG at rates below 0.7 fluid ounces/1,000 row-feet.

17/20

## TREE, VINE AND FRUIT CROPS

**BUSHBERRY** Including: Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Salal  
To control Japanese beetle (adults, feeding on foliage), White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and Oriental beetle apply 16.0 to 32.0 fluid ounces per acre. Apply specified dosage of HELOPRID 2 AG in one of the following methods:

- 1 Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 2 18-inch band on each side of the row followed with 0.25 inches of irrigation immediately after application.

For optimal grub control, apply HELOPRID 2 AG to control 1st or 2nd instar larvae. Application may be made post-bloom up to 7 days prior to harvest, or post-harvest until October 1st. For optimum control of Japanese beetle larvae, make applications from June 1 to July 15. Do not apply during bloom.

Application to grass covered rows, row middles, drive lanes, headlands, and other grassy areas in and around the berry field will control resident grub populations. Applications directed to the root-zone will help protect berry plant roots from grub feeding.

Apply HELOPRID 2 AG to moist soil. If necessary, apply one hour of irrigation water immediately before application of HELOPRID 2 AG To ensure maximum efficacy apply 1/2 to 1 inch of irrigation water or rainfall should be applied or received within 24 hours of application of HELOPRID 2 AG to facilitate movement into the soil and into the root-zone

### Notes and Restrictions for Bushberry:

- Pre-Harvest Interval (PHI): 7 days
- Maximum HELOPRID 2 AG allowed per season: 32.0 fluid ounces/Acre (0.50 lbs. ai/Acre)
- Do not apply during bloom.

### CITRUS (Field)

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.

To control Aphids, Asian citrus psyllid, Blackfly, Citrus leaf miner, Leaf hopper/Sharpshooters, Mealybugs, Scales, Termites (FL only) and Whiteflies apply 16.0 to 32.0 fluid ounces per acre. For suppression of Thrips (foliage feeding thrips only) and in response to symptoms of Citrus tristeza virus (CTV) through vector control and Citrus yellows apply 32.0 fluid ounces per acre.

### Applications

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. For optimum results, apply to newly planted trees or those previously trained to drip, trickle or micro-sprinkler irrigation. Soil should be lightly prewetted to break soil surface tension prior to applications of HELOPRID 2 AG. Chemigation application can be made separate to normal irrigation but followed by 10 to 20 minutes of additional watering to move HELOPRID 2 AG into root-zone. Allow 24 hours before initiating subsequent irrigations.
2. Soil surface band spray on both sides of the tree. Overlap bands at the tree base to create a continuous band within the drip-line area of the tree, to be followed immediately with light sprinkler irrigation sufficient to move the product into the upper portion of the root-zone. This method is suitable for very coarse soils with 0.75% organic matter or less;
3. Drench to base of tree not exceeding one-quart total solution per tree immediately around trunk of tree and extending outward covering the entire fibrous root system of the tree. Only recommended for trees up to 8 feet tall.

For control of existing termite infestations, apply specified dosage in 1 to 4 quarts of total solution volume, depending on size of tree, as a drench application to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk.

### Notes and Restrictions for Citrus (Field):

- Pre-Harvest Interval (PHI): 0 day
- Maximum HELOPRID 2 AG allowed per season: 32.0 fluid ounces/Acre (0.50 lbs. ai/Acre)

**CITRUS (containerized)**

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.

To control Aphids, Asian citrus psyllid, Blackfly, Citrus leafminer, Leafhoppers/Sharpshooters), Mealybugs, Scales, Whiteflies apply 0.75 milliliter per cubic foot of container media.

To control Citrus root weevil (larval complex) apply 1.25 to 2.50 milliliters per cubic foot of container media.

To suppress Citrus thrips apply to 2.50 milliliters per cubic foot of container media.

Determine volume of container and calculate dosage necessary to treat container. Apply calculated dosage of HELOPRID 2 AG per container as a soil drench or through low-pressure drip or trickle irrigation water.

Use sufficient carrier volume to ensure thorough uniform distribution throughout the media without loss of gravitational water from the container. For optimal results, make treatment at planting prior to insect infestation.

Repeat if necessary. For control of larvae of the citrus root weevil complex, make applications prior to neonate larvae entering potting media. Utilize higher dosage for heavy infestation.

**CRANBERRY**

To control Rootgrubs (*Scarabaeidae*), Rootworms (*Chrysomelidae*) apply 16.0 to 32.0 fluid ounces per acre. Apply HELOPRID 2 AG to moist soil. Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. As a soil spray (ground application) directed to the root and crown area using a minimum of 20 gal of water per acre.
2. As a chemigation application with 600 to 1,000 gal water.

Immediately upon application, HELOPRID 2 AG must be incorporated into root-zone by 0.1 to 0.3 inches water/Acre, either with the chemigation application or through irrigation/rainfall if not applied through chemigation. Inadequate incorporation within 24 hours of application may result in reduced control.

**Rootgrubs and Rootworms:**

Best control can be achieved by applying post-bloom (after bees removed) to coincide with the early instar larvae stage.

HELOPRID 2 AG has not been tested for crop response in tank mixes with other registered fungicides or insecticides. If tank mixing is desired, premix a sample of the HELOPRID 2 AG and the desired fungicide or insecticide partner at labeled rates and apply to a small area. Evaluate crop response with 48 hours and for at least two weeks prior to utilizing the tank mix on larger acreage. If crop injury results from the premix test, do not apply the tank mix to larger acreage.

**Notes and Restrictions for Cranberry:**

- Pre-Harvest Interval (PHI): 30 days
- Maximum HELOPRID 2 AG allowed per season: 32.0 fluid ounces/Acre (0.50 lbs. ai/Acre)
- Do not apply during bloom.

**GRAPE**

Including: American bunch grape, Muscadine grape, and Vinifera grape

To control Mealybugs, Leafhoppers/Sharpshooters, *Phylloxera\* spp*. Apply 16.0 to 32.0 fluid ounces per acre.

To suppress Pierce's Disease apply 24.0 to 32.0 fluid ounces per acre.

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation.
3. Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.

For optimum results, make application(s) between bud-break and the pea-berry stage.

•Repeated and regular use of HELOPRID 2 AG over several, consecutive growing seasons controls existing *Phylloxera* infestations over time or prevents *Phylloxera* from becoming established.

**Notes and Restrictions for Grape:**

- Pre-Harvest Interval (PHI): 30 days
- Maximum HELOPRID 2 AG allowed per season: 32.0 fluid ounces/Acre (0.50 lbs. ai/Acre)

19/20

### **HOPS\***

To control Aphids apply 19.2 fluid ounces per acre.

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation.
3. Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.

### **Notes and Restrictions for Hops:**

- Pre-Harvest Interval (PHI): 60 days
- Maximum HELOPRID 2 AG allowed per season: 19.2 fluid ounces/Acre (0.30 lbs. ai/Acre)

\*Use not permitted in California unless otherwise directed by supplemental labeling.

### **PECAN**

To control Aphids and Twolined spittlebugs apply 16.0 to 32.0 fluid ounces per acre.

To suppress Pecan scab (from reduction in honeydew deposition) apply 16.0 to 32.0 fluid ounces per acre.

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation.
3. Emitter or spot application in a minimum of 4 fluid ounces of mixture per emitter site.

### **Notes and Restrictions for Pecan:**

- Maximum HELOPRID 2 AG allowed per season: 32.0 fluid ounces/Acre (0.50 lbs. ai/Acre).
- Applications can be made from May 15 up to July 15. Applications made later in the season may result in reduced efficacy.
- Apply product to slightly moist soil and allow soil to dry prior to additional irrigation.

### **STONE FRUIT\***

Including: apricot, cherry (including sweet and tart), nectarine, peach, plum (including Chickasaw, Damson and Japanese), Plumcot, prune (fresh and dried)

To control Aphids (including woolly apple aphid) and Leafhoppers apply 16.0 to 24.0 fluid ounces per acre. Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

### **Notes and Restrictions for Stone Fruit:**

- Pre-Harvest Interval (PHI): 21 days

\*Use not permitted in California unless otherwise directed by supplemental labeling.

### **STONE FRUIT (Preplant, Root Drip Application)**

To control Black peach aphid (infesting roots) apply 2.0 fluid ounces per 10 gallons of root dip solution. Mix HELOPRID 2 AG at 2.0 fluid ounces per 10 gallons of water. Thoroughly wet bare-root transplant to slightly above the graft union by soaking roots in the HELOPRID 2 AG solution for up to 5 minutes. Allow solution to dry on roots and transplant trees as soon as possible following treatment.

### **POME FRUIT\***

Including: apple, crabapple, loquat, mayhaw, pear (including Oriental pear), quince

To control Aphids (including woolly apple aphid) and Leafhoppers apply 16.0 to 24.0 fluid ounces per acre. Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

### **Notes and Restrictions for Stone Fruit:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum HELOPRID 2 AG allowed per season: 24.0 fluid ounces/Acre (0.38 lbs. ai/Acre)

20/20

\*Use not permitted in California unless otherwise directed by supplemental labeling.

#### **TROPICAL FRUIT\***

Including: acerola, avocado, birida, black sapote, canistel, feijoa, jaboticaba, guava, longan, lychee, mamey sapote, mango, papaya, passionfruit, persimmon, pulasan, rambutan, sapodilla, Spanish lime, star apple, starfruit, wax jambu

To control Aphids, Leafhoppers, Whiteflies apply 24.0 to 32.0 fluid ounces per acre.

To suppress Scales apply 32.0 fluid ounces per acre.

Apply specified dosage of HELOPRID 2 AG in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

#### **Notes and Restrictions for Tropical Fruit:**

- Preharvest Interval (PHI): 6 days
- Maximum HELOPRID 2 AG allowed per season: 32.0 fluid ounces/Acre (0.50 lbs. ai/Acre)

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#### **POPLAR/COTTONWOOD\***

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

To control Aphids and Cottonwood leaf beetle apply 16.0 to 32.0 fluid ounces per acre.

To suppress *Phylloxera popularia* apply 16.0 to 32.0 fluid ounces per acre. Apply specified dosage of HELOPRID 2 AG in the following method:

1. Chemigation through low-pressure drip irrigation.

For Cottonwood leaf beetle, protection against damage will occur when application is made early, when the beetles first begin feeding. Larger trees may require earlier treatment as a result of slower uptake.

For Phylloxera, apply early in the year, from break of dormancy through May.

#### **Notes and Restrictions for Poplar/Cottonwood:**

- Maximum HELOPRID 2 AG allowed per season: 32.0 fluid ounces/Acre (0.50 lbs. ai/Acre)

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## **IMPORTANT: READ BEFORE USE**

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