

42750-110



09/07/2007

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

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Mr. Morris Gaskins  
Albaugh, Inc  
P.O. Janet Street, Suite H  
Valdosta, GA 31604

SEP 07 2007

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Subject: Addition of Foliar Uses to Label  
Imidacloprid 2FL AG  
EPA Reg. No. 42750-110  
Your Submission date, June 4, 2007

Dear Mr. Gaskins:

The submitted data referencing the labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act is acceptable provided the following changes are made:

Make the following Agency's generated changes to the product warranty statement:

Under Conditions: change the word "should" to the word "must" in the first sentence of the conditions of the warranty.

Under Disclaimer of Warranties: at the beginning of the first sentence add "To the extent consistent with applicable law,"...

Under Limitations of Liability: at the beginning of the first sentence add "To the extent consistent with applicable law,"...

A stamped copy of the review is enclosed for your records. If there are questions call me at 703 305-5409.

Sincerely,

A handwritten signature in black ink, appearing to read "Dani Daniel".

Dani Daniel  
Insecticide-Rodenticide Branch  
Registration Division 7505C

Enclosure:

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EDITOR's NOTE: 6/4/07 clean draft label to incorporate foliar uses to existing soil uses.

### IMIDACLOPRID 2FL AG

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.

SHAKE WELL BEFORE USING

STOP - Read the label before use

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

**ACCEPTED**  
**with COMMENTS**  
**In EPA Letter Dated:**

**SEP 07 2007**

*Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
42750-110*

IF SWALLOWED	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
IF IN EYES	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

In case of emergency call CHEMTREC toll free at 1-800-424-9300. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

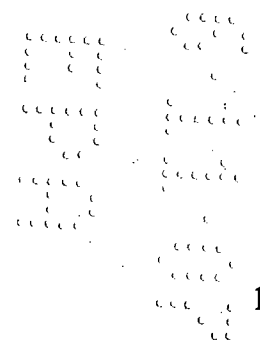
Note To Physician: No specific antidote is available. Treat the patient symptomatically.

EPA Reg. No. 42750-110

EPA Est. No. xxxxxx-xx-xxx

NET CONTENTS: \_\_\_\_\_

Manufactured For:  
ALBAUGH, INC.  
ANKENY, IA 50021



### 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:

1. Long-sleeved shirt and long pants
2. 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.
3. 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:

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

#### ENVIRONMENTAL HAZARDS

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

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

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

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

#### SPRAY DRIFT MANAGEMENT

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

Avoiding spray drift is the responsibility of the applicator.

### 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.

### 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, maintained 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.

### 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.

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### 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.

### 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 IMIDACLOPRID 2FL AG on erodible soils, Best Management Practices for minimizing runoff should be employed. Consult your local Natural Resources Conservation Service for recommendations in your use area.

### Endangered Species Notice

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

### Resistance Management

Some insects may develop 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 is used repeatedly. This can eventually result in the loss of this class of insecticides as a viable control.

Do not make over three consecutive applications of IMIDACLOPRID 2FL AG and/or other Group 4A neonicotinoid class products having a similar mode of action. Following a neonicotinoid series of treatments, Albaugh recommends rotation to application with products that control 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:

1. Coveralls
2. 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
3. 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.

**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.

Do not apply this product through any type of irrigation system unless it is specified in the "Recommended Application" section.

**SOIL APPLICATION RECOMMENDATIONS**

Direct applications of IMIDACLOPRID 2FL AG into the seed or root-zone of crop. Lack of correct application of IMIDACLOPRID 2FL AG into seed or root-zone could result in lessened or delayed efficacy. IMIDACLOPRID 2FL 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

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or trays, or where product is intended to be washed from foliage to soil prior to drying on foliage.

Best results of IMIDACLOPRID 2FL AG application are achieved when applications are made to the root-zone of plants. Earlier application of IMIDACLOPRID 2FL AG to developing plant results in earlier protection. IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG, to control insects that can vector detrimental virus transmission. Higher rates should be made when insecticidal pressure occurs later in the plants development cycle or when insect pressure is heavy and/or continuous. Despite the systemic nature of IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG application recommendations 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 an IMIDACLOPRID 2FL AG applications. Complete control of these pests/diseases may require supplemental control measures.

IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG to honey bees and other beneficial pollinators. Contact your local Cooperative Extension Service, PCAs, consultants or local Albaugh representative for application on these type crops.

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

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, Recommended Applications section for a given crop.

#### FOLIAR APPLICATION DIRECTIONS

DO Not Apply Imidacloprid 1.6L AG in Enclosed Structures Such as Greenhouses or Planthouses.

Apply IMIDACLOPRID 2FL AG as a directed or broadcast foliar spray. Thorough coverage of foliage without runoff is required for maximum insecticidal efficacy. Use of adequate spray volumes and correctly calibrated application equipment is critical. Use of a spray adjuvant may enhance thorough coverage. Lack of adequate coverage and retention of IMIDACLOPRID 2FL AG on foliage and fruit can delay or lessen insect control. IMIDACLOPRID 2FL AG may be applied with ground or aerial application equipment that has been properly calibrated.

Minimum recommended spray volumes (unless otherwise specified on crop sections) are:

- 10 gallons/Acre by ground application
- 5 gallons/Acre through aerial equipment.

IMIDACLOPRID 2FL AG may also be applied by overhead chemigation (see CHEMIGATION DIRECTIONS FOR USE section below) if allowed in crop specific recommended application section.

IMIDACLOPRID 2FL AG application to crops grown for production of true seed intended for private or commercial planting may be allowed under State specific supplemental labeling. Extreme caution should be taken to minimize exposure of IMIDACLOPRID 2FL AG to honey bees and other pollinators. Do not use IMIDACLOPRID 2FL AG on crops requiring bee pollination during bloom and a minimum of 10 days prior to bloom. Additional information on IMIDACLOPRID 2FL AG uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants or local Albaugh representatives.

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

#### MIXING INSTRUCTIONS FOR SOIL AND FOLIAR APPLICATIONS

1. Add a 50% of the required amount of water to the spray tank
2. Begin agitation
3. Add labeled rate of IMIDACLOPRID 2FL AG
4. Add balance of water needed.

Maintain sufficient agitation during both mixing and application. IMIDACLOPRID 2FL AG may be tank mixed with other pesticides and/or fertilizer solutions. Refer to Compatibility Note below. When tank mixing IMIDACLOPRID 2FL AG with other pesticides, prepare the tank mixture as recommended above and follow suggested Mixing Order below.

#### Mixing Order for Tank Mixes

1. Wettable powders
2. IMIDACLOPRID 2FL AG, or other flowables second,
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, Albaugh 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 that should not be used.

#### USE IN CHEMIGATION SYSTEMS

##### Types of Irrigation Systems for Soil Application:

Chemigation applications of IMIDACLOPRID 2FL 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 specifically recommended for a given crop. Do not apply IMIDACLOPRID 2FL AG through any other type of irrigation system.

##### Types of Irrigation Systems for Foliar Application:

Chemigation applications of IMIDACLOPRID 2FL AG may be made to crops through overhead sprinkler chemigation systems if specified in crop-specific recommendations sections. Do not apply IMIDACLOPRID 2FL AG through any other type of irrigation system. IMIDACLOPRID 2FL AG foliar chemigation applications should be made as concentrated as possible. Retention of IMIDACLOPRID 2FL AG on target site of insect infestation is necessary for optimum activity. Chemigation of IMIDACLOPRID 2FL AG in water volumes exceeding 0.10 inches/Acre are not recommended.

Uniform Water Distribution and System Calibration: The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can



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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

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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.

PLANTBACK INTERVAL*	COMMENT
Immediate Plant-back:	Any crop listed on this label plus the following crops not on this label: barley, canola, cardoon, Chinese celery, 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

#### COTTON (Soil Application)

To control Aphids, Plant bugs, Thrips, 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 IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG allowed per crop season: 21.1 fluid ounces/Acre (0.33 lb ai/Acre)
- Apply no more than 0.5 lb 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 IMIDACLOPRID 2FL AG.

Please see Resistance Management section of this label.

#### COTTON (Foliar Application)

Apply as foliar spray at specified rate per acre when insect pressure reaches economic threshold. Uniform coverage is required to achieve best control and a spray adjuvant may help improve coverage. Two applications may be required to achieve control when initial insect populations are high. Retreatment should be based on field scout reports. IMIDACLOPRID 2FL AG may be tank mixed with other labeled insecticides to increase control or control pests not controlled by imidacloprid. Apply only through

properly calibrated ground, aerial or chemigation application equipment insuring thorough coverage.

For control of Aphids, Flea hoppers, Bandedwinged whitefly, Plant bugs (east of Rocky Mountains), Green stink bug, Southern green stink bug, Bollworm/Budworm (ovicidal effect) apply 2.0 to 4.0 fluid ounces per acre (3.0 fluid ounces: CA only) and suppression of Lygus bug (west of Rocky Mountains) and Whiteflies (other than bandedwinged whitefly) apply 3.0 to 4.0 fluid ounces per acre, (3.0 fluid ounces per acre: CA only) as a broadcast or directed spray to infested area. Apply only through properly calibrated ground, aerial or chemigation application equipment insuring thorough coverage.

**Tank Mix Recommendations**

For early season control of Thrips apply 2.0 to 3.0 fluid ounces of IMIDACLOPRID 2FL AG per acre + 1.6 to 3.2 fluid ounces of Bidrin® 8\* per acre as a broadcast or directed foliar spray to infested area. For mid to late season control of plant bugs, stink bugs (including Brown stink bug), Grasshoppers, Saltmarsh caterpillar and Cotton leafperforator apply 2.0 to 3.0 fluid ounces of IMIDACLOPRID 2FL AG per acre + 4.0 to 8.0 fluid ounces of Bidrin® 8\* per acre as a broadcast spray of directed foliar spray to infested area.

**Notes and Restrictions for Cotton:**

- Pre-Harvest Interval (PHI): 14 days
- Minimum interval between applications : 7 days
- Maximum IMIDACLOPRID 2FL AG allowed per season: 20.0 fluid ounces/Acre (0.31 lb AI/A); For CA: 17.6 fluid ounces/Acre (0.28 lb. AI/A)
- Maximum number of IMIDACLOPRID 2FL AG applications per crop season: 6
- Do not graze treated fields after any application of IMIDACLOPRID 2FL AG.

\* Refer to the Bidrin® 8 product label for specific use recommendations; observe all restrictions and precautions that appear on the label.

**POTATO (Soil Application)**

To control Aphids, Colorado potato beetle, Flea beetles, Leafhoppers, Potato Psyllids 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 IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG may be made in a 2 to 4 inch band (width of planter shoe opening) and completely covered.

**Soil Application Notes and Restrictions for Potato:**

- Maximum allowed per crop season: 20.0 fluid ounces/acre (0.31 lb AI/Acre.)

### POTATO (Foliar Application)

For control of Aphids, Colorado potato beetle, Flea beetles, Leafhoppers, Psyllids apply 3.0 fluid ounces per acre as a broadcast or directed spray to infested area. Apply only through properly calibrated ground, aerial or chemigation application equipment insuring thorough coverage.

#### Notes and Restrictions for Potatoes:

- Pre-Harvest Interval (PHI): 7 days
- Minimum Interval between applications: 7 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 12.1 fluid ounces/Acre (0.19 lb. AI/A)

### 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 100 lbs seed. Equivalent to 8.0 to 16.0 fluid ounces per acre depending on row spacing. (Based on a seeding rate of 2000 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 IMIDACLOPRID 2FL AG. Maintain agitation during application. Fungicidal dust treatments may be applied after IMIDACLOPRID 2FL 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 Imidacloprid 2 FL AG should not be exposed to sunlight.

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

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

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

**TOBACCO (Soil Application)**

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

To control Mole Crickets, Whiteflies, Wireworms apply 1.4 to 2.8 fluid ounce per 1,000 plants as seedling tray drench or 1.8 to 2.8 fluid ounces per 1000 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 ounce per 1,000 plants as seedling tray drench or 1.8 to 2.8 fluid ounces per 1000 plants as an in-furrow or transplant water.

Apply specified dosage of IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG from foliage into potting media. Failure to wash IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG are generally the best method of application. However, the specified rate of IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL 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 1000 plants as an in-furrow or transplant water.

**Soil Application Notes and Restrictions for Tobacco:**

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

**TOBACCO (Foliar Application)**

For control of Aphids apply 1.6 to 3.2 fluid ounces per acre as a broadcast or directed spray to infested area. Use higher rate when insect pressure is heavy.

For control of Flea beetles and Japanese beetle apply 3.2 fluid ounces per acre as a broadcast or directed spray to infested area.

**Foliar Application Notes and Restrictions for Tobacco:**

- Pre-Harvest Interval (PHI): 14 days
- Minimum interval between applications : 7 days
- Maximum number of IMIDACLOPRID 2FL AG allowed per crop season: 17.9 fluid ounces/Acre (0.28 lb. AI/A)

Apply only through properly calibrated ground, aerial or chemigation application equipment insuring thorough coverage.

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## VEGETABLE AND SMALL FRUIT CROPS

For Foliar Application uniform coverage is required to achieve best control and a spray adjuvant may help improve coverage. Two applications may be required to achieve control when initial insect populations are high. Retreatment should be based on field scout reports. IMIDACLOPRID 2FL AG may be tank mixed with other labeled insecticides to increase control or control pests not controlled by imidacloprid.

Apply only through properly calibrated ground, aerial or chemigation application equipment insuring thorough coverage.

### CUCURBIT VEGETABLES<sup>1</sup> (Soil Application Only)

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 melo 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, Hubbard 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), 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 IMIDACLOPRID 2FL 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. IMIDACLOPRID 2FL AG must be incorporated into root-zone

#### Notes and Restrictions for Cucurbit Vegetables:

- Preharvest Interval (PHI): 21 days
- Maximum IMIDACLOPRID 2FL AG allowed per application: 24.0 fluid ounces/Acre (0.38 lb ai/acre)

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

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## CUCURBIT VEGETABLES (Planthouse Application)<sup>1,\*</sup>

To control Aphids and Whiteflies apply 0.1 fluid ounce per 1000 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 IMIDACLOPRID 2FL AG from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL 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.

### Notes and Restrictions for Cucurbit Vegetables (Planthouse Application):

- Maximum amount applied in the planthouse: 0.1 fluid ounces (0.00156 pound AI)/1,000 plants, and maximum number of applications in planthouse 1.

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

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

## GLOBE ARTICHOKE (Foliar Application Only)

For control of Aphids and Leafhoppers apply 3.2 to 8.0 fluid ounces per acre. Use higher rates when pest pressure more severe.

### Notes and Restrictions for Global Artichoke:

- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 14 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 32.0 fluid ounces/Acre (0.50 lb. AI/A)

**GREENHOUSE VEGETABLES<sup>1</sup> (Soil Application Only)**  
(mature plants in production greenhouses)

Cucumber, Tomato Only

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

To control Aphids and Whiteflies apply 1.4 fluid ounces per 1000 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 (Orius sp.) Can occur when IMIDACLOPRID 2FL AG is applied.

Many varieties of vegetables have been tested for tolerance to IMIDACLOPRID 2FL AG and show good safety. However, certain varieties may show more sensitivity to IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG applications per crop season: 1

**FRUITING VEGETABLES<sup>1</sup> (Soil Application)**

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), 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 IMIDACLOPRID 2FL 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. IMIDACLOPRID 2FL AG must be incorporated into root-zone.

**Soil Application Notes and Restrictions for Fruiting Vegetables:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum IMIDACLOPRID 2FL AG allowed on pepper and okra crops per application: 32.0 fluid ounces/Acre (0.50 lb ai/acre)
- Maximum IMIDACLOPRID 2FL AG allowed on other fruiting vegetable crops per application: 24.0 fluid ounces/Acre (0.38 lb ai/acre)
- Not for use on crops grown for seed unless allowed by state-specific supplemental labeling



**FRUITING VEGETABLES (Foliar Application)**

Eggplant, Ground cherry, Okra, Pepper (including bell, chili, cooking, pimento and sweet), Tomato, Pepinos, Tomatillo

For control of Aphids, Colorado potato beetle, Leafhoppers, Whiteflies apply 3.0 fluid ounces per acre.

For control of Pepper weevil (Pepper only) apply 5.0 fluid ounces per acre. Make applications prior to a damaging population becoming established.

**Foliar Application Notes and Restriction for Fruiting Vegetables:**

- Pre-Harvest Interval (PHI): 0 days
- Minimum interval between applications: 5 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 15.2 fluid ounces/Acre (0.24 lb. AI/A)
- Not for use on crops grown for seed unless allowed by state-specific supplemental labeling

Applications of IMIDACLOPRID 2FL AG must be part of a full-season resistance management program that uses alternate applications products from multiple classes of chemistry and different modes of action. For pepper weevil, apply specified dosage of IMIDICLOPID 2FL AG by ground equipment only, timing applications prior to a damaging population becoming established. Good coverage of foliage and fruit is necessary for optimum control.

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

To control Aphids and Whiteflies apply 0.1 fluid ounce per 1000 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 IMIDACLOPRID 2FL AG from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash IMIDACLOPRID 2FL 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.

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

- Maximum amount IMIDACLOPRID 2FL AG applied in the planthouse: 0.1 fluid ounces (0.00156 lb AI)/1000 Plants
- Maximum number IMIDACLOPRID 2FL AG applications in planthouse: 1
- Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

**Important Note:** Not all varieties of fruiting vegetables have been tested for tolerance to IMIDACLOPRID 2FL 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 permitted in California unless otherwise specified by supplemental labeling.

**HEAD and STEM BRASSICA VEGETABLES<sup>1</sup> (Soil Application)**

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<sup>1</sup> (Soil Application)**

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 IMIDACLOPRID 2FL 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. IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG allowed per application: 24.0 fluid ounces/Acre (0.38 lb ai/acre)
- <sup>1</sup>Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

**HEAD and STEM BRASSICA VEGETABLES<sup>2</sup> (Foliar Application)**

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 VEGETABLES<sup>2</sup> (Foliar Application)**

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)<sup>1</sup>

For control of Aphids, Flea beetles, Leafhoppers, Whiteflies apply 3.0 fluid ounces per acre.

**Notes and Restrictions fro Head and Stem Brassica Vegetables and Leafy Vegetables:**

- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 5 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 15.2 fluid ounces/Acre (24 lb. AI/A)

<sup>1</sup>Use not permitted in California unless otherwise directed by supplemental labeling.  
<sup>2</sup>Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

## LEAFY PETIOLE VEGETABLES (Soil Application Only)

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

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

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

Apply specified dosage of IMIDACLOPRID 2FL 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 ½" 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. IMIDACLOPRID 2FL AG must be incorporated into root-zone

Notes and Restrictions for Leafy Petiole Vegetables:

- Pre-Harvest Interval (PHI): 45 days
- Maximum IMIDACLOPRID 2FL AG allowed per application: 24.0 fluid ounces/Acre (0.38 lb ai/acre)

## LEGUME VEGETABLES<sup>1</sup> (except soybean, dry) (Soil Application)

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 IMIDACLOPRID 2FL 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 ½" 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.

#### Soil Application Notes and Restrictions for Legume Vegetables:

- Preharvest Interval (PHI): 21 days
  - Maximum IMIDACLOPRID 2FL AG allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb ai/acre)
- <sup>1</sup>Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

#### LEGUMES VEGETABLES<sup>1</sup> (except soybean, dry) (Foliar Application)

Edible Podded and Succulent Shelled Pea/ and Bean and Dried Shelled Pea and Bean

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

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

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

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

Other Beans and Peas (Broad bean (fava), chickpea (garbanzo bean), Guar, Jackbean, Lablab bean (hyacinth bean), lentil, Pigeon pea, soybean (immature seed), Sword bean)

For control of Aphids, Leafhoppers, Whiteflies apply 2.8 fluid ounces per acre.

#### Note and Restrictions for Legume Vegetables:

- Pre-Harvest Interval (PHI): 7 days
  - Minimum interval between applications: 7 days
  - Maximum IMIDACLOPRID 2FL AG allowed per crop season: 8.3 fluid ounces/Acre (0.13 lb. AI/A)
- <sup>1</sup>Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

#### ROOT VEGETABLES<sup>1</sup> (Soil Application)

Including: Beet (garden)<sup>2</sup>, Carrot<sup>2</sup>, Burdock (edible)<sup>2</sup>, Celeriac<sup>2</sup>, Chervil (turnip-rooted)<sup>2</sup>, Chicory<sup>2</sup>, Ginseng, Horseradish, Parsley (turnip-rooted), Parsnip<sup>2</sup>, Radish<sup>2</sup>, Oriental radish (diakon)<sup>2</sup>, Rutabaga<sup>2</sup>, Salsify (oyster plant), Salsify (black)<sup>2</sup>, Salsify (Spanish), Skirret, Turnip<sup>2</sup>

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

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

To control Aphids, Flea beetles, Leafhoppers, Whiteflies apply 0.7 to 1.7 fluid ounces per 1000 row feet. Equivalent to 10.0 to 24.0 fluid ounces per acre depending on row spacing.

Apply specified dosage of IMIDACLOPRID 2FL 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 1000 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. IMIDACLOPRID 2FL AG rates less than 0.7 fluid ounces/1000 row-feet will not provide adequate residual pest control. IMIDACLOPRID 2FL AG treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

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**Soil Application Notes and Restrictions for Root Vegetables:**

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

**TUBEROUS AND CORM VEGETABLES<sup>1</sup> (Soil Application)**

Including: Arraçacha, Arrowroot, Artichoke (Chinese and Jerusalem), Canna (edible, Queensland arrowroot), Casava (bitter and sweet)<sup>2</sup>, Chayote (root), Chufa, Dasheen (taro)<sup>2</sup>, Ginger, Leren, Sweet potato, Tanier (cocoyam)<sup>2</sup>, Tumeric, Yam bean (jicama, manioc pea), Yam (true)<sup>2</sup>  
(For recommended applications on potato see Field Crop section)

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

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

To control Aphids, Flea beetles, Leafhoppers, Whiteflies apply 0.7 to 1.7 fluid ounces per 1000 row feet. Equivalent to 10.0 to 24.0 fluid ounces per acre depending on row spacing.

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

1. In-furrow spray (rate specified per 1000 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/1000 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. IMIDACLOPRID 2FL AG rates less than 0.7 fluid ounces/1000 row-feet will not provide adequate residual pest control. IMIDACLOPRID 2FL AG treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

**Soil Application Notes and Restrictions for Tuberous and Corm Vegetables:**

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

**ROOT, TUBEROUS and CORM VEGETABLES<sup>1</sup> (Foliar Application)**

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

For recommended applications on potato see Field Crops section

For control of Aphids, Flea beetles, Leafhoppers, Whiteflies apply 2.8 fluid ounces per acre.

**Note and Restrictions for Root Tuberos and Corn Vegetables:**

- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 5 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 2.8 fluid ounces/Acre on radish; 8.3 fluid ounces/Acre (0.13 lb. AI/A) on other crops.
- Maximum IMIDACLOPRID 2FL AG applications per crop season: 1 on radish; 3 on other crops

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

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

**STRAWBERRY<sup>1,2</sup> (Soil Application)**  
(Annual and Perennial crops)

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

Apply specified dosage of IMIDACLOPRID 2FL 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.

**Soil Application Notes and Restrictions for Strawberries (annual and perennial crops)**

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

**STRAWBERRY (Soil Application)**  
(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 to 24.0 fluid ounces/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 IMIDACLOPRID 2FL 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 should be equivalent to the width of the anticipated fruiting bed.
3. As a chemigation application with 600 to 1000 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 IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG allowed preseason: 24.0 fluid ounces/Acre (0.38 lb ai/acre)

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

<sup>2</sup>Do not use both application methods on the same crop in the same season.

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**STRAWBERRY (Foliar Application)**

For control of Aphids, Spittlebugs, Whiteflies apply 3.0 fluid ounces per acre.

**Foliar Application Notes and Restrictions for Strawberries:**

- Pre-Harvest Interval (PHI): 7 days
- Maximum interval between applications: 5 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 9.1 fluid ounces/Acre (0.14 lb. AI/A)
- Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

**SUGARBEET<sup>1</sup> (Soil Application Only)**  
(For use only in CA)

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

To control Aphids, Leafhoppers, Whiteflies, 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 IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG allowed per crop season: 12.0 fluid ounces/Acre (0.18 lb ai/acre)
- Maximum imidacloprid allowed per season: 0.18 lb ai/acre (from any formulation) on any row spacing

CONVERSION CHART FOR LINEAR APPLICATION								
RATE Fluid ounces/Acre	Rate in Fluid Ounces / 1000 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 IMIDACLOPRID 2FL AG rate applied affects the length of control and the degree of control. Row-spacing X IMIDACLOPRID 2FL 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. Albaugh offers no warranty for use of IMIDACLOPRID 2FL AG at rates below 0.7 fluid ounces/1000 row-feet.

### TREE, VINE AND FRUIT CROPS

For Foliar Application uniform coverage is required to achieve best control and a spray adjuvant may help improve coverage. Two applications may be required to achieve control when initial insect populations are high. Retreatment should be based on field scout reports. IMIDACLOPRID 2FL AG may be tank mixed with other labeled insecticides to increase control or control pests not controlled by imidacloprid.

#### BUSHBERRY (Soil Application)

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 IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG to control 1<sup>st</sup> or 2<sup>nd</sup> instar larvae. Application may be made post-bloom up to 7 days prior to harvest, or post-harvest until October 1<sup>st</sup>. 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 IMIDACLOPRID 2FL AG to moist soil. If necessary, apply one hour of irrigation water immediately before application of IMIDACLOPRID 2FL AG. To ensure maximum efficacy, 1/2 to 1 inch of irrigation water or rainfall should be applied or received within 24 hours of application of IMIDACLOPRID 2FL AG to facilitate movement into the soil and into the root-zone

#### Soil Application Notes and Restrictions for Bushberry:

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

#### BUSHBERRY (Foliar Application)

Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Salal

For control of Aphids and Leafhoppers/Sharpshooters apply 2.4 to 3.2 fluid ounces per acre. Use higher rates when pest pressure more severe.

For control of Japanese beetles (adults), Blueberry Maggot and Thrips apply 4.8 to 6.4 fluid ounces per acre. Use higher rates when pest pressure more severe.



For control of Blueberry maggot apply 6.4 fluid ounces per acre.

Notes and Restrictions for Bushberries:

- Pre-Harvest Interval (PHI): 3 days
- Maximum interval between applications : 7 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb. AI/A)
- Maximum number of IMIDACLOPRID 2FL AG applications per crop season: 5
- Maximum application volume (water): 20.0 GPA - ground; 5.0 GPA - aerial.
- Do not apply pre-bloom or during bloom or when bees are actively foraging.

CITRUS (Field) (Soil Application)

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, Leafhopper/Sharpshooters, Mealybugs, Scales, Termites (FL only), 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 IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG. Chemigation application can be made separate to normal irrigation but followed by 10 to 20 minutes of additional watering to move IMIDACLOPRID 2FL AG into root-zone. Allow 24 hours before initiating subsequent irrigations.
2. Soil surface band spray on both sides of the tree. Bands should overlap 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.

Soil Application Notes and Restrictions for Citrus (Field):

- Pre-Harvest Interval (PHI): 0 day
- Maximum IMIDACLOPRID 2FL AG allowed per season: 32.0 fluid ounces/Acre (0.50 lb ai/acre)

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**CITRUS (Foliar Application)**

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

Pests Controlled	Rate fluid ounces/Acre
Aphids Asian citrus psyllid Black fly Leafhoppers/Sharpshooters Leafminers Mealy bugs Scales Whiteflies	8.0 to 16.0 (depending on tree size, target pest and infestation pressure)
Thrips (suppression only)	8.0 to 16.0

**Foliar Application Notes and Restrictions for Citrus**

- Pre-Harvest Interval (PHI): 0 days
- Maximum interval between applications: 10 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb. AI/A)
- Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

**Applications**

Aerial application of IMIDACLOPRID 2FL AG may result in slower activity and reduced control to results from ground application.

Scales - time applications to the crawler stage. Treat each generation. Where concentrated applications are appropriate, increase the spray solution concentration to apply an equivalent rate per acre to that applied in the diluted application. The 16.0 fluid ounce/Acre rate is based on full sized trees. This rate may be reduced proportionally for smaller trees.

**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 IMIDACLOPRID 2FL 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, treatment should be made at planting prior to insect infestation. Repeat if necessary. For control of larvae of the citrus root weevil complex, application should be made prior to neonate larvae entering potting media. Utilize higher dosage for heavy infestation.

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### CRANBERRY (Soil Application Only)

To control Rootgrubs (Scarabaeidae), Rootworms (Chrysomelidae) apply 16.0 to 32.0 fluid ounces per acre.

Apply IMIDACLOPRID 2FL AG to moist soil. Apply specified dosage of IMIDACLOPRID 2FL 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 1000 gal water

Immediately upon application, IMIDACLOPRID 2FL 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.

IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG allowed per season: 32.0 fluid ounces/Acre (0.50 lb ai/acre)
- Do not apply during bloom.

### GRAPE (Soil Application)

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 IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG over several, consecutive growing seasons controls existing Phylloxera infestations over time or prevents Phylloxera from becoming established.

## Soil Application Notes and Restrictions for Grape:

- Pre-Harvest Interval (PHI): 30 days
- Maximum IMIDACLOPRID 2FL AG allowed per season: 32.0 fluid ounces/Acre (0.50 lb ai/acre)

## GRAPE (Foliar Application)

American bunch grape, Muscadine grape and Viniferous grape

For control of Leafhoppers/Sharpshooters and Mealybugs apply 2.4 to 3.2 fluid ounces per acre. Use higher rates when pest pressure more severe.

For control of Grapeleaf skeletonizer<sup>1/</sup> apply 3.0 fluid ounces per acre. Control can usually be achieved with ground applications that provide more thorough coverage of foliage. Aerial applications may only provide suppression due to lack of thorough coverage.

## Foliar Application Notes and Restrictions for Grapes:

- Pre-Harvest Interval (PHI): 0 days
- Maximum interval between applications: 14 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 6.0 fluid ounces/Acre (0.1 lb. AI/A)

## Applications

<sup>1/</sup> Grapeleaf skeletonizer control can be expected from applications that provide thorough coverage of foliage. Aerial applications may provide suppression.

HOP<sup>1</sup> (Soil Application)

To control Aphids apply 19.2 fluid ounces per acre.

Apply specified dosage of IMIDACLOPRID 2FL 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.

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

## Soil Application Notes and Restrictions for Hops:

- Pre-Harvest Interval (PHI): 60 days
- Maximum IMIDACLOPRID 2FL AG allowed per season: 19.2 fluid ounces/Acre (0.30 lb ai/acre)

## HOP (Foliar Application)

For control of Aphids apply 6.4 fluid ounces per acre.

## Notes and Restrictions for Hops:

- Pre-Harvest Interval (PHI): 28 days
- Maximum interval between applications: 21 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 19.2 fluid ounces/Acre (0.30 lb. AI/A)

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**PECAN (Soil Application)**

To control Aphids and Twolined spittlebug 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 IMIDACLOPRID 2FL 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.

**Soil Application Notes and Restrictions for Pecan:**

- Maximum IMIDACLOPRID 2FL AG allowed per season: 32.0 fluid ounces/Acre (0.50 lb 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.

**PECAN (Foliar Application)**

(Use not permitted in California unless otherwise directed by supplemental labeling)

For control of Aphids (use higher rate for Black pecan aphid), Phylloxera and Spittlebugs apply 2.8 to 5.6 fluid ounces per acre. Use higher rate when pest pressure more severe.

**Notes and Restrictions for Pecans:**

- Do not apply after shuck split.
- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 10 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 22.4 fluid ounces/Acre (0.35 lb. AI/A)

**STONE FRUIT<sup>1</sup> (Soil Application)**

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 IMIDACLOPRID 2FL AG in one of the following methods:

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

**Soil Application Notes and Restrictions for Stone Fruit:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum IMIDACLOPRID 2FL AG allowed per season: 24.0 fluid ounces/Acre (0.38 lb ai/acre)

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

**STONE FRUIT (Foliar Application)**

Apricot, Cherry (including sweet and tart), nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh and dried)

Pests Controlled	Rate fluid ounces/Acre
Aphids Green June beetle Japanese beetle Leafhoppers /Sharpshooters Plant bugs Rose chafer San Jose scale	3.2 to 6.4
Cherry fruit fly (maggot of Eastern and Western)	4.8 to 6.4
Pest suppressed	
Plum curculio Stink bugs	6.4
<ul style="list-style-type: none"> <li>• Aerial application of IMIDACLOPRID 2FL AG may result in slower activity and reduced control relative to results from ground application.</li> <li>• Minimum application volume (water): 50 GPA -ground application; 25 GPA - aerial application</li> <li>• Do not apply pre-bloom or during bloom or when bees are actively foraging.</li> </ul>	

**Foliar Application Notes and Restrictions for Apricot, Nectarine, Peach:**

- Pre-Harvest Interval (PHI): 0 day
- Minimum interval between applications: 7 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 19.2 fluid ounces/Acre (0.30 lbs. A/A)

**Foliar Application Notes and Restrictions for Cherries, Plums, Plumcot, Prune:**

- Pre-Harvest Interval (PHI): 7 day
- Minimum interval between applications: 10 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 32.0 fluid ounces/Acre (0.50 lbs. A/A)

Aerial application of IMIDACLOPRID 2FL AG may result in slower activity and reduced control relative to results from ground application.

**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 IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG solution for up to 5 minutes. Allow solution to dry on roots and transplant trees as soon as possible following treatment.

**POME FRUIT<sup>1</sup> (Soil Application)**

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 IMIDACLOPRID 2FL AG in one of the following methods:

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

Soil Application Notes and Restrictions for Pome Fruit:

- Pre-Harvest Interval (PHI): 21 days
- Maximum IMIDACLOPRID 2FL AG allowed per season: 24.0 fluid ounces/Acre (0.38 lb ai/acre)

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

POME FRUIT (Foliar Application)

Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

Pests Controlled	Rate fluid ounces/Acre <sup>1</sup>
Leafhoppers	3.2 - 6.4
Aphids (except woolly apple aphid) Leafminers San Jose scale	6.4
FOR PEAR, ONLY Mealybugs Pear psylla	16.0

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 IMIDACLOPRID 2FL AG while most leafhoppers are in the nymphal stage.

Leafminer - for first generation leafminer control, make application after pollination is complete and bees are no longer present in the orchard. Greatest leafminer control will result from the earliest possible application. For second and succeeding generations of leafminer, better control will be 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. IMIDACLOPRID 2FL AG will not control late instar larvae.

Mealybugs - apply maximum gallonage for tree with ground equipment. Ensure good spray coverage of the trunk and scaffolding limbs or other resting sites of mealybugs.

Rosy apple aphid - apply prior to leafrolling caused by rosy apple aphid.

San Jose scale - time applications to the crawler stage. Treat each generation.

<sup>1</sup>The amount of IMIDACLOPRID 2FL AG required per acre will depend on tree size and volume of foliage present. The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees. To calculate the rate needed on smaller trees, multiply the pest specific rate (e.g., for aphid control, 1.6 fluid ounces/100 gallons) times the number of 100 gallons of spray solution required to thoroughly wet foliage just prior to the point of runoff, on one acre of the trees being treated. For concentrate sprays, apply the same amount of IMIDACLOPRID 2FL AG per acre as would be applied in a dilute spray based on tree size and foliage volume.

Foliar Application Notes and Restrictions for Pome Fruits:

- Pre-Harvest Interval (PHI): 7 days
- Maximum interval between applications: 10 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb. AI/A)
- Do not apply pre-bloom or during bloom or when bees are actively foraging.

Aerial application of IMIDACLOPRID 2FL AG may result in slower activity and reduced control compared to ground application due to less thorough coverage.

TROPICAL FRUIT<sup>1</sup> (Soil Application)

Including: acerola, avocado, 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 IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL AG allowed per season: 32.0 fluid ounces/Acre (0.50 lb ai/acre)

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

TROPICAL FRUIT (Foliar Application)

Acerola, Avocado, Black sapote, Canistel, Feijoa, Jaboticaba, Guava, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Pulasan, rambutan, Sapodilla, Spanish lime, Star apple, Starfruit, Wax jambu

For control of Aphids, Leafhoppers /Sharpshooters, Thrips, and Whiteflies apply 6.4 fluid ounces per acre.

For suppression of Scales apply 6.4 fluid ounces per acre.

(Use not permitted in California unless otherwise directed by supplemental labeling)

Foliar Application Notes and Restrictions for Tropical Fruit:

- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 10 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 32.0 fluid ounces/Acre (0.50 lb, AI/A)
- Do not apply pre-bloom or during bloom or when bees are actively foraging.

Aerial application of IMIDACLOPRID 2FL AG may result in slower activity and reduced control compared to ground application due to less thorough coverage.

OTHER CROPS

POPLAR/COTTONWOOD<sup>1</sup> (Soil Application)

cludes: 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 Phylloxerina popularia apply 16.0 to 32.0 fluid ounces per acre.

Apply specified dosage of IMIDACLOPRID 2FL 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.

**Soil Application Notes and Restrictions for Poplar/Cottonwood:**

- Maximum IMIDACLOPRID 2FL AG allowed per season: 32.0 fluid ounces/Acre (0.50 lb ai/acre)

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

**POPLAR/COTTONWOOD (Foliar Application)**

(includes members of the genus Populus grown for pulp or timber)

(Use not permitted in California unless otherwise directed by supplemental labeling)

Apply as foliar spray at specified rate per acre when insect pressure reaches economic threshold. Uniform coverage is required to achieve best control and a spray adjuvant may help improve coverage. Two applications may be required to achieve control when initial insect populations are high. Retreatment should be based on field scout reports. IMIDACLOPRID 2FL AG may be tank mixed with other labeled insecticides to increase control or control pests not controlled by imidacloprid.

For control of Aphids and Leaf beetles apply 3.2 to 6.4 fluid ounces per acre. Use higher rates when pest pressure more severe.

**Foliar Application Notes and Restrictions for Poplar/Cottonwood:**

- Minimum interval between applications: 10 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 32.0 fluid ounces/Acre (0.50 lb. AI/A)
- Do not apply pre-bloom or during bloom or when bees are actively foraging.

Aerial application of IMIDACLOPRID 2FL AG may result in slower activity and reduced control compared to ground application due to less thorough coverage.

**CHRISTMAS TREE (Foliar Application)**

For control of Aphids, Adelgids and Sawflies apply 3.2 to 6.4 fluid ounces per acre. Use higher rate when pest pressure more severe.

**Foliar Application Notes and Restrictions for Christmas Trees:**

- Minimum interval between applications: 7 days
- Maximum IMIDACLOPRID 2FL AG allowed per crop season: 32.0 fluid ounces/Acre (0.50 lb. AI/A)

Aerial application of IMIDACLOPRID 2FL AG may result in slower activity and reduced control compared to ground application due to less thorough coverage.

Gall-forming adelgids - time applications to coincide with full bud-swell or first bud-break of earliest bud-breaking trees. After galls form, spraying will no longer be ineffective.

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**IMPORTANT: READ BEFORE USE**

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

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