86363-8

3/18/2014

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

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

KAIZEN TECHNOLOGIES, LLC
c/o Scott Baker
Lighthouse Product Services
1966 W 15th Street Suite 6
Loveland, CO 80538

MAR 18 2014

Subject: Amended label adding pollinator protection language
Product Name: IMIDACLOPRID 2FL
EPA Reg. No. 86363-8
EPA Decision No. 488613
Submission dated March 7, 2013

Dear Mr. Baker:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act is acceptable. A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. See 40 CFR 156.10(a)(6).

Under 40 CFR 152.130(d), EPA may establish dates by which all product distributed or sold by the registrant must bear revised labeling. The following paragraphs set forth the schedule for ensuring that that your product bears revised labeling within a reasonable time period.

- Any product released for shipment after 2/28/14 must bear the new label.

If these conditions are not complied with, EPA will take appropriate action against this registration. If you have any questions please contact Dr. Debra Rate at 703-306-0309 or rate.debra@epa.gov.

Regards,

Venus Eagle

Venus Eagle, Product Manager (01)
Insecticide-Rodenticide Branch

IMIDACLOPRID 2FL

A SYSTEMIC AND FOLIAR INSECTICIDE FOR USE ON FIELD CROPS, COTTON, SOYBEANS, POTATO, PEANUTS and TOBACCO; IN CITRUS, TREE NUT, and FRUIT ORCHARDS; ON FIELD and GREENHOUSE VEGETABLES; ON BERRY, BUSH and VINE CROPS; and ON OTHER LISTED CROPS.

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

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Reg. No. 86363-8 EPA Est. No. XXXXX-XX-XXX

Net Contents:_____ Gal (_____L) 030910-030614

Manufactured For:
KAIZEN TECHNOLOGIES, LLC
1966 W 15th Street, Suite 6, Loveland, CO 80538

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER: *Have the product container or label with you when calling a poison control center, doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time (NPIC Web site: www.npic.orst.edu). Outside of these times call your poison control center at 1-800-222-1222.*	
NOTE TO PHYSICIAN: No specific antidote is available. Treat symptomatically.	

ACCEPTED
MAR 18 2014
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under:

EPA. Reg. No: 86363-8

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Caution. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

Personal Protective Equipment (PPE)
Applicators and other handlers must wear:

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

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

ENGINEERING CONTROLS STATEMENT

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

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

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

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 foraging 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.

PROTECTION OF POLLINATORS

APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.

Look for the bee hazard icon  in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx. Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

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

Spray Drift Management

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

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 temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

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

No-Spray Zone Requirements for Soil Applications
Do not apply within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.

Run-off Management
Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip. When using IMIDACLOPRID 2FL on erodible soils, Best Management Practices for minimizing run-off should be employed. Consult your local Natural Resources Conservation Service for recommendations in you use area.

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

Resistance Management

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

IMIDACLOPRID 2FL Insecticide contains a Group 4A Insecticide. Insecticide biotypes with acquired or inherent resistance to Group 4A may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species.

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

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

Other Group 4A neonicotinoid products used as soil treatments include: Platinum.

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

DIRECTIONS FOR USE

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

See individual crops for specific pollinator protection application restrictions. If none exist under the specific crop, for foliar applications, follow these application directions for crops that are contracted to have pollinator services or for food/feed & commercially grown ornamentals that are attractive to pollinators:

1. **FOR CROPS UNDER CONTRACTED POLLINATION SERVICES**

   Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met:

If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

2. **FOR FOOD/FEED CROPS AND COMMERCIALLY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS**

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset
- The application is made to the target site when temperatures are below 55°F
- The application is made in accordance with a government-initiated public health response
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

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.

DO NOT apply this product, by any application method, to lindens, basswood, or *Tilia* species trees in Oregon.

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treatment areas during the restricted entry interval (REI) of 12 hours.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any water material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes plus socks

STORAGE AND DISPOSAL

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

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

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

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:

Nonrefillable container: Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

For packages up to 5 gallons. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For packages greater than 56 gallons: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

For refillable containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into

application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

APPLICATION INSTRUCTIONS

Direct applications of IMIDACLOPRID 2FL Insecticide into the seed or root-zone of crop. IMIDACLOPRID 2FL may be applied with ground or chemigation application. Do not apply by air. Use only by broadcast or foliar applications on seedling flats or trays, or where product is meant to be washed from foliage to soil before drying on foliage. Apply Imidacloprid 2FL to the root-zone of plants. Since IMIDACLOPRID 2FL is continuously taken into the roots over a long period of time, the earlier IMIDACLOPRID 2FL is available to a developing plant, the earlier the protection begins. The systemic nature of IMIDACLOPRID 2FL allows movement from roots through the xylem tissue to all vegetative parts of the plant, which results in extended residual activity of IMIDACLOPRID 2FL, the control of insects and the prevention and/or reduction of virus transmission or symptom expression, and plant health benefits. The rate of IMIDACLOPRID 2FL applied affects the length of the plant protection period; use higher rates when infestations occur later in crop development, or where pest pressure is continuous. IMIDACLOPRID 2FL will generally not control insects infesting flowers, blooms or fruit, and additional crop protection may be required for insects feeding in, or on these plant parts and for insects not listed in the crop-specific, pests controlled sections of this label.

Suppression (less than complete control of certain diseases and insect pests including reduced feeding) may also be caused by an IMIDACLOPRID 2FL application. In such cases, pests/diseases may require supplemental control measures.

The use of IMIDACLOPRID 2FL on crops grown for production of true seeds is not permitted for private or commercial planting unless allowed by state specific 24(c) labeling. Do not allow exposure of IMIDACLOPRID 2FL to honey bees and other pollinators. Additional information on IMIDACLOPRID 2FL uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants, or local representative.

Mix IMIDACLOPRID 2FL with water or other appropriate diluent before application. Agitate the IMIDACLOPRID 2FL and water suspension to avoid settling.
Restriction: Do not apply more than 0.50 lbs active ingredient per acre, per year, regardless of formulation or method of application unless specified within a crop-specific section for a given crop.

Mixing Instructions

To prepare the application mixture, first add a portion of the required amount of water to the tank and then add IMIDACLOPRID 2FL while agitation is underway. Add the remainder of water needed. Agitate during both mixing and application.
IMIDACLOPRID 2FL may also be used with other pesticides and/or fertilizer solutions. Please see compatibility information below. When tank mixtures of IMIDACLOPRID 2FL and other pesticides are involved, prepare the tank mixture as specified above and follow suggested Mixing Order below.

Mixing Order

When making pesticide mixtures, add IMIDACLOPRID 2FL and other wettable powders or wettable granules first, followed by flowable (suspension concentrate) products, then emulsifiable concentrates last. Agitate as each ingredient is added. Do not add an ingredient until previous one is thoroughly mixed. If a fertilizer solution is added, a

fertilizer/pesticide compatibility agent may be needed. To ensure a uniform spray mixture, continuous agitation is necessary during both mixing and application.

Compatibility Information

Test the compatibility of any intended mixture before adding IMIDACLOPRID 2FL to the spray or mix tank. To do this, add proportionate amounts of each ingredient in the appropriate order, to a suitable size jar, cap, shake the mixture for 5 minutes, and let set for 5 minutes. If the mixing is poor, or there is formation of precipitates that do not readily redisperse, then the blend is incompatible and should not be used. For further information, contact your local Kaizen Technologies LLC representative.

CHEMIGATION INSTRUCTIONS

Types of Irrigation Systems

Chemigation applications of IMIDACLOPRID 2FL may only be made to crops through chemigation systems as specified in crop-specific application sections and only through low-pressure systems unless specifically listed for a given crop. Do not apply Imidacloprid 2FL through any other type of irrigation system.

Uniform Water Distribution and System Calibration

The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, 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 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-clowing 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. System must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Using Water From Public Water Systems

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves

an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option of the RPZ the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must contain a functional normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where the pesticide distribution is adversely affected. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

ROTATIONAL CROPS*

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

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

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

10-Month Plant-Back Onion and bulb vegetables

12-Month Plant-Back All other crops

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

FIELD CROPS

When applied as foliar spray use 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. Base Retreatment on field scout reports. Imidacloprid 2FL 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.

COTTON – Foliar

PESTS	RATE	INSTRUCTIONS
Aphids, Flea hoppers, Plant bugs (east of Rocky Mountains) and suppression of Lygus bug (west of Rocky Mountains) and Whiteflies	3.0 fluid ounces per acre	Apply as a broadcast or directed spray to infested area. Apply only through properly calibrated ground, aerial or chemigation application equipment insuring thorough coverage.

Restrictions for Cotton: Foliar

• Pre-Harvest Interval (PHI): 14 days

• Minimum interval between applications: 7 days
• Maximum Imidacloprid 2FL allowed per year: 20 fluid ounces/Acre (0.31 lb. AI/A);
For CA: 17.6 fluid ounces/Acre (0.28 lb. AI/A)
• Do not graze treated fields after any application of Imidacloprid 2FL.
• No matter which formulation or method of application is used, do not apply more than 0.5 lb active ingredient of any Imidacloprid product per acre per year, including seed treatment, soil and foliar uses.
• Please refer to the Resistance Management section of this label.

COTTON - Soil

PESTS	RATE	INSTRUCTIONS
Cotton Aphid Plant Bugs Thrips Whiteflies	1.3 fl oz/1000 row feet 17.0 - 21.1 fl oz/A (depending on row spacing)	Use one of the following methods to apply the specified dosage of Imidacloprid 2FL 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. Do not apply more than 21.1 fl oz (0.33 lb ai) IMIDACLOPRID 2FL per acre per year.

Restrictions for Cotton: Soil
• Pre-Harvest Interval (PHI): 14 days
• Minimum interval between applications: 7 days
• Maximum Imidacloprid 2FL allowed per year: 21.1 fluid ounces/Acre (0.33 lb. AI/A)
• Do not graze treated fields after any application of Imidacloprid 2FL.
• No matter which formulation or method of application is used, do not apply more than 0.5 lb active ingredient of any Imidacloprid product per acre per year, including seed treatment, soil and foliar uses.
• Please refer to the Resistance Management section of this label.

POTATO – Foliar

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

Restrictions for Potatoes: Foliar
• Pre-Harvest Interval (PHI): 7 days
• Minimum Interval between applications: 7 days
• Maximum Imidacloprid 2FL allowed per year: 12.8 fluid ounces/Acre (0.20 lb. AI/A)

POTATO - Soil

PESTS	RATE	INSTRUCTIONS
Controlled Aphids Colorado Potato Beetle Flea Beetles Leafhoppers Potato Psyllid **Suppressed** Symptoms of: Potato leaf roll Virus (PLRV) Potato yellows Net necrosis (PLRV) Wireworms (with in-furrow spray at planting)	0.9 - 1.3 fl oz/1000 row feet 13.0 - 20.0 fl oz/A	Use one of the following methods to apply the specified dosage of Imidacloprid 2FL 1. In-furrow spray during planting, directed onto 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. Narrow band directly below the eventual seed row in a bedding operation no more than 7 days before planting. • Place IMIDACLOPRID 2FL applications below soil surface and in contact with seed piece or within root-zone. For potatoes grown on highly permeable soils with a shallow water table, at-plant applications of IMIDACLOPRID 2FL may be made in 2 to 4 inch band (width of planter show opening) and completely covered.

Restrictions for Potatoes: Soil

• Do not apply more than 20.0 fl oz (0.31 lb ai) IMIDACLOPRID 2FL per acre per year.

POTATO - (Seed Piece Treatment)

PESTS	RATE	INSTRUCTIONS
Controlled Aphids Colorado potato beetle Flea beetles Leafhoppers Potato psyllid Wireworms (seed-piece protection)	0.4 – 0.8 fl oz/100 lbs seed 8.0 – 16.0 fl oz/A (based on a seeding rate of 2000 lbs/A)	Apply specified rate as a diluted spray onto seed-pieces using a shielded spray system. Dilute with 3 parts water or less to 1 part IMIDACLOPRID 2FL. Agitate or stir spray solution as necessary. Apply fungicidal or inert absorbent dusts after IMIDACLOPRID 2FL is applied. • Make applications only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust. • Plant seed pieces as soon as possible after treatment. Do not allow prolonged exposure of seed pieces treated with this product to sunlight and in accordance with the recommendation of your local Extension specialist. • Consult your local Kaizen Technologies LLC representative or crop protection product dealer for information relevant to your area
Suppressed Symptoms of: Potato leaf roll virus (PRLV) Potato yellows Net necrosis (PLRV)	0.8 fl oz/100 lbs seed 16.0 fl oz/A (based on a seeding rate of 2000 lbs/A)	

Restrictions for Potato Seed Piece Treatments:

• Do not apply more than 20.0 fl oz (0.31 lb ai) IMIDACLOPRID 2FL per acre per year.

• Do not use treated seed-pieces for food, feed, or fodder. Do not apply additional application of any Imidacloprid product (in-furrow), following an IMIDACLOPRID 2FL seed-piece treatment.

SOYBEAN- FOLIAR

PESTS	RATE	INSTRUCTIONS
For control of: Aphids Bean leaf beetle Cucumber beetles / Rootworm adults Japanese beetle (adults) Leafhoppers Whiteflies	2.8 fl oz/A	Apply as a broadcast or directed spray method through properly calibrated ground, aerial or chemigation application equipment. Thorough coverage of foliage is necessary.

Restrictions for Soybean: Foliar

- Pre-Harvest Interval (PHI): **21 days**
- Minimum interval between applications: **7 days**
- Maximum amount allowed per year: **8.30 fluid ounces/Acre** (0.13 lb. AI/A)
- This use is not permitted in CA unless otherwise directed by state specific 24(c) labeling.

TOBACCO – Foliar

PESTS	RATE	INSTRUCTIONS
Aphids	1.6 to 3.2 fluid ounces per acre	Apply as a broadcast or directed spray to infested area. Use higher rate within the specified rate range when insect pressure is heavy.
Flea beetle Japanese beetle	3.2 fluid ounces per acre	Apply as a broadcast or directed spray to infested area.
• Apply only through properly calibrated ground, aerial or chemigation application equipment insuring thorough coverage.		

Restrictions for Tobacco: Foliar

- Pre-Harvest Interval (PHI): 14 days
- Minimum interval between applications: 7 days
- Maximum number of Imidacloprid 2FL allowed per year: 18.0 fluid ounces/Acre (0.28 lb. AI/A)

TOBACCO - Soil

PESTS	RATE	INSTRUCTIONS
Aphids Flea beetles	1.0 fl oz/1000 plants as seedling tray drench OR 1.4 fl oz/1000 plants (in-furrow transplant water)	Use one of the following methods to apply specified dosage of Imidacloprid 2FL Uniform broadcast foliar spray to seedlings in trays (tray drench) no more than 7 days before transplanting, followed immediately by overhead irrigation to wash IMIDACLOPRID 2FL from foliage into potting media. In-furrow spray or transplant-water drench during setting. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
Mole crickets Whiteflies Wireworms	1.4 – 2.8 oz/1000 plants as seedling tray drench OR 1.8 – 2.8 fl oz/1000 plants (in-furrow	

	transplant water)	
Suppressed Cutworms Symptoms of: Tomato spotted wilt virus (TSWV)	1.4 – 2.8 oz/1000 plants as seedling tray drench OR 1.8 – 2.8 fl oz/1000 plants (in-furrow transplant water)	
• Failure to wash the product from foliage may reduce pest control. • Handle transplants carefully during setting to avoid dislodging treated potting media from roots. • Proper tray drench applications of IMIDACLOPRID 2FL have been shown to be the most effective method of application. However, the specified rate of IMIDACLOPRID 2FL 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 into the plant and a delay in control.		

Restrictions for Tobacco: Soil

- Pre-Harvest Interval (PHI): 14 days
- Do not apply more than 32.0 fl oz (0.50 lb ai) IMIDACLOPRID 2FL per acre per year.

VEGETABLE AND SMALL FRUIT CROPS

When applied as foliar spray use 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. Base retreatment on field scout reports. Imidacloprid 2FL 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

Chayote(fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melon* including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon, and Winter melon), Pumpkin, Squash, (includes summer squash types such as: butternut squash calabaza, crookneck squash, 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 *Citulius lanatus*).

Cucurbit Vegetable - Soil

PESTS	RATE	INSTRUCTIONS
Control: Aphids Cucumber beetles Leafhoppers Thrips (foliage-feeding thrips only) Whiteflies	16.0 – 24.0 fl oz/A	Use one of the following methods to apply the specified dosage of IMIDACLOPRID 2FL: 1. Chemigation into root-zone by means of 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

Suppresion: Bacterial wilt (as vectored by various cucumber beetles) Leaf silvering from whitefly feeding		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. Incorporate product into the root zone.

Restrictions for Cucurbit Vegetables: Soil

- Do not apply more than 24.0 fl oz (0.38 lb ai) IMIDACLOPRID 2FL per acre.
- Pre-Harvest Interval (PHI): 21 days
- Not for use on crops grown for seed unless specifically allowed by State-specific 24(c) labeling.

Planthouse Applications

PESTS	RATE	INSTRUCTIONS
Aphids Whiteflies	0.1 fl oz/1000 plants	Use one of the following methods to apply the specified dosage to seedling in trays in the planthouse. Target soil media (trey drench), not more than 7 days prior to transplanting. 1. Uniform, broadcast high volume foliar spray, followed by sufficient overhead irrigation to wash IMIDACLOPRID 2FL from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash product from foliage may reduce pest control; 2. Injection into overhead irrigation system, using sufficient volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray.
• Applications made in the planthouse will only provide short-term protection and should not substitute for a field application. Make an additional field application within 2 weeks after transplanting to provide continuous protection. Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. Handle transplant carefully during setting to avoid dislodging treated potting media from roots. • Not all varieties of cucurbit vegetables have been tested for tolerance to IMIDACLOPRID 2FL applied to seedling flats. It is therefore recommended to treat a small number of plants and confirm tolerance for 7 days before treating entire planthouse.		

Restrictions for Cucurbit Vegetables: Planthouse

- Do not apply more than once as a planthouse application.
- Do not apply more than 0.1 fl oz (0.00156 lb ai)/1000 plants IMIDACLOPRID 2FL for planthouse applications.

GREENHOUSE VEGETABLES - (Mature plants in production greenhouses) Cucumber, Tomato, only

PESTS	RATE	INSTRUCTIONS
Aphids Whiteflies	1.4 fl oz/1000 plants	Apply specified dosage in at least 16 gallons of water for tomatoes and 21 gallons of water for cucumbers. Use soil drenches, micro-irrigation, drip irrigation, or hand-held or motorized calibrated irrigation equipment.
• Do not apply to immature plants since phytotoxicity may occur.		

• Apply when infestation pressure surpasses threshold and beneficial 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 is applied. Many varieties of vegetables have been tested for tolerance to IMIDACLOPRID 2FL and show good safety. However, certain varieties may show more sensitivity to IMIDACLOPRID 2FL. Treatment of a few plants is recommended before treating a whole greenhouse.

Restrictions for Greenhouse Vegetables:

- Pre-Harvest Interval (PHI): 0 days
- Do not apply IMIDACLOPRID 2FL more than once per crop season.
- Not for use on crops grown for seed unless specifically allowed by State-specific 24(c) labeling.

FRUITING VEGETABLES

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

FRUITING VEGETABLES - Foliar

PESTS	RATE	INSTRUCTIONS
Aphids, Colorado potato beetle, Leafhoppers Whiteflies	3.0 fluid ounces per acre	
Pepper weevil (Pepper only)	4.9 fluid ounces per acre	Make applications prior to a damaging population becoming established.

Restriction for Fruiting Vegetables: Foliar

- Not for use on crops grown for seed unless specifically allowed by State-specific 24(c) labeling.
- Pre-Harvest Interval (PHI): 0 days
- Minimum interval between applications: 5 days
- Maximum IMIDACLOPRID 2FL allowed per crop season: 15.3 fluid ounces/Acre (0.24 b. AI/A)
- Applications of IMIDACLOPRID 2FL 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.

FRUITING VEGETABLS - Soil

PESTS	RATE	INSTRUCTIONS
Controlled: Aphids Colorado potato beetle Flea beetles Leafhoppers Thrips (foliage-feeding thrips, only) Whiteflies **Suppressed:** Symptoms of: Tomato mottle virus Tomato spotted	Okra and Pepper 16.0 – 32.0 fl oz/A Other Crops 16.0 – 24.0 fl oz/A	Use one of the following methods to apply specified dosage of IMIDACLOPRID 2FL: 1. Chemigation into root-zone by means of 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;

wilt virus Tomato yellow leaf curl virus		5. Post-seeding drench, transplant-water drench, or hill drench; 6. Subsurface side-dress on both sides of each row. • IMIDACLOPRID 2FL must be incorporated into root-zone.

Restriction for Fruiting Vegetables: Soil

• Pre-Harvest Interval (PHI): 21 days

• Do not apply more than 32.0 fl oz (0.50 lb ai)/A IMIDACLOPRID 2FL per crop season to pepper and okra;

• Do not apply more than 24.0 fl oz (0.38 lb ai)/A IMIDACLOPRID 2FL per crop season to other fruiting vegetables.

Planthouse Application

PESTS	RATE	INSTRUCTIONS
Aphids Whiteflies	0.1 fl oz/1000 plants	Use one of the following methods to apply the specified dosage to seedlings in trays in the planthouse. Target soil media (tray drench), not more than 7 days prior to transplanting. 1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash IMIDACLOPRID 2FL from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash the product 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.
• Applications made in the planthouse will only provide short-term protection and should not substitute for a field application. Make an additional field application within 2 weeks after transplanting to provide continuous protection. Applications of higher rates or increased number of application in planthouse may result in significant plant injury. Handle transplants carefully during setting to avoid dislodging treated potting media from roots. • Not all varieties of fruiting vegetables have been tested for tolerance to IMIDACLOPRID 2FL applied to seedling flats. It is therefore recommended to treat a small number of plants and confirm tolerance for 7 day prior to treating entire planthouse.		

Restriction for Fruiting Vegetables: Planthouse

• Do not apply more than 0.1 fl oz (0.00156 lb ai)/1000 plants IMIDACLOPRID 2FL for planthouse applications.

• Do not apply more than once as a planthouse application.

GLOBE ARTICHOKE - Foliar

PESTS	RATE	INSTRUCTIONS
Aphids Leafhoppers	3.2 to 8.0 fluid ounces per acre	Use higher rate within the specified rate range when pest pressure is more severe.

Restrictions for Global Artichoke: Foliar

• Pre-Harvest Interval (PHI): 7 days

• Minimum interval between applications: 14 days
• Maximum IMIDACLOPRID 2FL allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/A)

GLOBE ARTICHOKE – Soil

PESTS	RATE	INSTRUCTIONS
Aphids Leafhoppers	15.0 to 30.0 fluid ounces per acre	Apply specified rate of this product in one of the following methods. 1. Chemigation into root zone through low pressure drip, trickle, micro sprinkler or equivalent equipment OR 2. In-furrow spray directed on or below seed.

Restrictions for Global Artichoke: Soil
• Pre-Harvest Interval (PHI): 7 days
• Maximum IMIDACLOPRID 2FL allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/A)
• This use not permitted in California unless otherwise directed by state specific 24(c) labeling.

HEAD AND STEM BRASSICA VEGETABLES
Broccoli, Broccoli raab (rapini), Brussels sprouts, cabbage, Cauliflower, Cavalo broccoli, Chinese (gai lon) broccoli, Chinese (box choy) cabbage, Chinese (napa) cabbage, Chinese mustard (gai choy) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard Spinach, Rape greens, Turnip (tops or leaves).

LEAFY GREENS VEGETABLES
Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Roquette), Chervil, Chrysanthemum (edible leaved and garland), Cilantro, Corn salad, Cress (garden), Cress (upland,) yellow rocket, winter cress), Dandelion, dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach), Watercress[1] (upland).

HEAD AND STEM BRASSICA AND LEAFY GREENS VEGETABLES - Foliar

PESTS	RATE	INSTRUCTIONS
Aphids, Flea beetles, Whiteflies	2.8 fluid ounces per acre	Apply as a broadcast or directed spray through properly calibrated ground, aerial, or chemigation application equipment. Thorough coverage of foliage is necessary.

Restrictions for Head and Stem Brassica and Leafy Greens Vegetables: Foliar
• Pre-Harvest Interval (PHI): 7 days
• Minimum interval between applications: 5 days
• Maximum IMIDACLOPRID 2FL allowed per crop season: 14.7 fluid ounces/Acre (0.23 lb. AI/A)
• Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.
• [1]For applications made to watercress, production fields must be drained of water at least 24 hours prior to application and water must not be reapplied to the field for a minimum of 24 hours following application. Application must be made to fully leafed up canopies only. Do not apply to native cress growing in streams or other bodies of water.

HEAD AND STEM BRASSICA AND LEAFY GREENS VEGETABLES - Soil

PESTS	RATE	INSTRUCTIONS
Aphids Whiteflies	10.0 – 24.0 fl oz/36 inch rows	Use one of the following methods to apply the specified amount of IMIDACLOPRID 2FL: 1. Chemigation into root-zone by means of 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 must be incorporated into root-zone.

Restrictions for Head and Stem Brassica and Leafy Vegetables: Soil

- Pre-Harvest Interval (PHI): 21 days
- Do not apply more than 24.0 fl oz (0.38 lb ai)/A IMIDACLOPRID 2FL per crop season.
- Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

LEAFY PETIOLE VEGETABLES

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

LEAFY PETIOLE VEGETABLES - Soil

PESTS	RATE	INSTRUCTIONS
Aphids Leafhoppers Thrips (foliage feeding only) Whiteflies	10.0 – 24.0 fl oz/A On 36 inch rows	Apply specified dosage of IMIDACLOPRID 2FL using one of the following methods: 1. Chemigation into root zone by means of 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 must be incorporated into root-zone.

Restrictions for Leafy Petiole Vegetables: Soil

- Pre-Harvest Interval (PHI): 45 days
- Do not apply more than 24.0 fl oz (0.38 lb ai)/A Imidacloprid 2FL per crop season
- Not for use on crops grown for seed unless specifically allowed by state specific 24(c) labeling

LEGUME VEGETABLES except soybean, dry:
Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean including, Bean (*Lupinus* spp., includes grain lupin, sweet lupin, white lupin, and white sweet lupin); Bean (*Phsaeolus* 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 cathang, Chinese longbean cowpeas, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); Pea (*Pisum* spp., includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea); Other Beans and Peas (Broad Bean (fava), Chickpea (garbanzo bean), Guar, Jackbean, Lablab bean (hyacinth bean), Lentil, Pigeon pea, Soybean (immature seed), Sword bean)

LEGUME VEGETABLES except soybean, dry - Foliar

PESTS	RATE	INSTRUCTIONS
Aphids, Leafhoppers, Whiteflies	2.8 fluid ounces per acre	Apply as a broadcast or directed spray through properly calibrated ground, aerial, or chemigation application equipment. Thorough coverage of foliage is necessary.

Restrictions for Legume Vegetables:Foliar
- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 7 days
- Maximum IMIDACLOPRID 2FLallowed per crop season: 8.4 fluid ounces/Acre (0.13 lb. AI/A)
- Not for use on crops grown for seed unless specifically allowed by State-specific 24(c) labeling.

LEGUME VEGETABLES except soybean, dry - Soil

PESTS	RATE	INSTRUCTIONS
Controlled: Aphids Leafhoppers Thrips (foliage-feeding thrips, only) Whiteflies **Suppressed:** Symptoms of: Bean common mosaic virus (BCMV) Bean golden mosaic virus (BGMV) Beet curly top hybrigeminivirus (BCTV)	16.0 – 24.0 fl oz/A	Apply specified dosage of IMIDACLOPRID 2FL using one of the following methods: 1. Chemigation into root-zone by means of 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 to a depth of 1 to 1 ½" with sufficient irrigation with 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.

Restrictions for Legume Vegetables: Soil
- Pre-Harvest Interval (PHI): 21 days
- Do not apply more than 24.0 fl oz (0.38 lb ai)/A IMIDACLOPRID 2FL per crop season.
- Not for use on crops grown for seed unless specifically allowed by State-specific 24 (c)

labeling.

ROOT, TUBEROUS and CORM VEGETABLES

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

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

For applications on potato see "FIELD CROPS" section.

ROOT, TUBEROUS and CORM VEGETABLES - Foliar

PESTS	RATE	INSTRUCTIONS
Aphids, Flea beetles, Leafhoppers and Whiteflies	2.8 fluid ounces per acre	Apply as a broadcast or directed spray through properly calibrated ground, aerial, or chemigation application equipment. Thorough coverage of foliage is necessary.

Restrictions for Root Tuberous and Corm Vegetables: Foliar

- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 5 days
- Maximum IMIDACLOPRID 2FL allowed per crop season: 2.8 fluid ounces/Acre on radish (0.044 lb. AI/A); 8.4 fluid ounces/Acre (0.13 lb. AI/A) on other crops.
- Maximum IMIDACLOPRID 2FL applications per crop season: 1 on radish; 3 on other crops
- Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

ROOT VEGETABLES

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

* Tops and Greens from these crops may be used for food or feed.

ROOT VEGETABLES - Soil

PESTS	RATE	INSTRUCTIONS
Aphids Flea beetles Leafhoppers Whiteflies	0.7 – 1.7 fl oz/1000 row feet 10.0 – 24.0 fl oz/A	Apply specified dosage of IMIDACLOPRID 2FL using one of the following methods: 1. Chemigation into root-zone by means of 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" below seed depth during planting; 3. In a narrow (2" or less) band directly (1 to 2") below the eventual seed row in a bedding operation 14 or fewer days before planting.
• The rate used affects the length of control. Use higher rate within the specified rate range where infestations occur later in crop development, or where pest pressure is continuous. Rates less than 0.7 fluid ounces/1000 row-feet will not provide adequate		

residual pest control. IMIDACLOPRID 2FL treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

Restrictions for Root Vegetables: Soil

- Pre-Harvest Interval (PHI): 21 days
- Do not apply more than 24.0 fl oz (0.38 lb ai)/A IMIDACLOPRID 2FL per crop season.
- Do not apply more than once per crop season.
- Not for use on crops grown for seed unless specifically allowed by state specific 24(c) labeling
- Use not permitted in California unless otherwise directed by state specific 24(c) labeling

TUBEROUS AND CORM VEGETABLES

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

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

TUBEROUS AND CORM VEGETABLES - Soil

PESTS	RATE	INSTRUCTIONS
Aphids Flea beetles Leafhoppers Whiteflies	10.0 – 24.0 fl oz/acre 0.7 – 1.7 fl oz/1000 row feet	Use one of the following methods to apply specified dosage of IMIDACLOPRID 2FL: 1. In-furrow spray (rate specified per 1000 row-feet) over planting material (hulis) or shanked-in 1 to 2" below hulis depth at planting: 2. Side-dress not more than 0.6 fl oz/1000 row-feet no later than 45 days after planting. Observe same PHI as above.
• The rate applied affects the length of control. Use higher rates within the specified rate range where infestations occur later in crop development, or where pest pressure is continuous. Rates less than 0.7 fl oz/1000 row-feet may not provide adequate residual pest control. IMIDACLOPRID 2FL treated crops grown on very high organic matter soils (muck) may also require additional pest management control.		

Restrictions for Root Tuberous and Corm Vegetables: Soil

- Pre-Harvest Interval (PHI) from planting application: 3 days (leaves); 125 days (corms).
- Do not apply more than 24.0 fl oz (0.38 lb ai)/A IMIDACLOPRID 2FL per crop season.
- Do not apply IMIDACLOPRID 2FL more than once per crop season.
- Not for use on crops grown for seed unless specifically allowed by state specific 24(c) labeling

STRAWBERRY – Foliar

PESTS	RATE	INSTRUCTIONS
Aphids, Spittlebugs and Whiteflies	2.9 fluid ounces per acre	

Restrictions for Strawberries: Foliar

- Pre-Harvest Interval (PHI): 7 days
- Maximum interval between applications: 5 days
- Maximum IMIDACLOPRID 2FL allowed per crop season: 9.0 fluid ounces/Acre (0.14 lb. AI/A)
- Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

STRAWBERRIES - Soil
Annual and Perennial Strawberries

PESTS	RATE	INSTRUCTIONS
Aphids Whiteflies	24.0 – 32.0 fl oz/A	Use one of the following methods to apply specified dosage of IMIDACLOPRID 2FL: 1. Chemigation into root-zone by means of 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 transplanting. The application rate affects the length of control. Use higher rates within the specified rate range where infestations may occur later in crop development or where pest pressure is continuous.

Restrictions for Strawberries: Soil
• Pre-Harvest Interval (PHI): 14 days.
• Do not apply more than 32.0 fl oz (0.50 lb ai)/A IMIDACLOPRID 2FL per crop season.
• Not for use on crops grown for seed unless specifically allowed by State-specific state specific 24(c) labeling.
• Do not apply immediately prior to bud opening or during bloom or when bees are foraging.
• Do not use both pre and post harvest application methods on the same crop in the same season.

Post-Harvest Use on Perennial Strawberries

PESTS	RATE	INSTRUCTIONS
White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle, Oriental beetle)	16.0 – 24.0 fl oz/A	Make a single application post harvest to coincide with renovation of strawberry fields and during active egg-laying period of beetles. Apply specified rate of IMIDACLOPRID 2FL using one of the following methods: 1. As a ground spray by means of 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 – 1000 gallons of water followed by 0.10 to 0.25" irrigation.

Restrictions for Post-Harvest Use on Perennial Strawberries:
• All soil-surface applications must be followed by either 0.25" of rainfall over overhead irrigation per acre within 2 hours of application in order to adequately incorporate IMIDACLOPRID 2FL into egg-depostion zone.
• Pre-Harvest Interval (PHI): 14 days.
• Do not apply more than 24.0 fl oz (0.38 lb ai)/A IMIDACLOPRID 2FL per year.
• Do not use both pre and post harvest application methods on the same crop in the same

season.

SUGARBEETS – Soil

PESTS	RATE	INSTRUCTIONS
Controlled: Aphids Leafhoppers Whiteflies Flea beetles **Suppressed:** Symptoms of: Western yellows/Beet curly top hybridgeminivirus	6.0 – 12.0 fl oz/A	Applied specified rate of IMIDACLOPRID 2FL in sufficient carrier for uniform application, directly below each seed furrow. Apply either during the bedding operation immediately prior to planting or at the time of planting. The low specified rate may be used to aid establishment of stands in whitefly areas, or for early season control of the other pests listed.

Restrictions for Sugarbeets: Soil

- For use only in California
- Do not apply more than 12.0 fl oz (0.18 lb ai)/A IMIDACLOPRID 2FL per year.
- Do not apply more than a total of 0.18 lb active ingredient (any formulation) on any row spacing per year.
- Do not apply during bloom or 10 days prior to bloom or when bees are foraging.
- Do not use on crops grown for seed unless permitted by state specific 24(c) labeling.
- Not for use on crops grown for seed unless specifically allowed by State-specific 24(c) labeling.

IMIDACLOPRID 2FL INSECTICIDE CONVERSION CHART FOR LINEAR APPLICATION

RATE Fluid Ounces/A	RATE fluid ounces/1000 row-feet Based on average row spacing (in inches)							
	10	15	20	25	30	35	40	45
10	0.19	0.29	0.38	0.48	0.57	0.67	0.76	0.86
12	0.23	0.34	0.46	0.57	0.69	0.80	0.92	1.03
14	0.27	0.40	0.54	0.67	0.80	0.94	1.07	1.21
16	0.31	0.46	0.61	0.77	0.92	1.07	1.22	1.38
18	0.34	0.52	0.69	0.86	1.03	1.21	1.38	1.55
20	0.38	0.57	0.76	0.96	1.15	1.34	1.53	1.72
22	0.42	0.63	0.84	1.05	4.26	1.47	1.68	1.89
24	0.46	0.69	0.92	1.15	1.38	1.61	1.84	2.07
26	0.50	0.75	0.99	1.24	1.49	1.74	1.99	2.24
28	0.54	0.80	1.07	1.34	1.61	1.87	2.14	2.41
30	0.57	0.86	1.15	1.43	1.72	2.01	2.29	2.58
32	0.6	0.92	1.22	1.52	1.84	2.14	2.45	2.75

Important: The application rate affects the length of control and to a considerable extent, the degree of control of effect. Row-spacing X IMIDACLOPRID 2FL rate combinations in shaded blocks may not proved adequate residual pest control and are not recommended for long-term, residual control. Use higher labeled rates as specified where infestations may occur later in crop development or where pest pressure is continuous. Kaizen Technologies LLC offers no warranty for use of IMIDACLOPRID 2FL at rates below 0.7 fl oz/1000 row-feet.

TREE, BUSH, AND VINE CROPS

When applied as foliar spray use 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. Base retreatment on field scout reports. IMIDACLOPRID 2FL may be tank mixed with other labeled insecticides to increase control or control pests not controlled by imidacloprid.

BUSHBERRY - Foliar

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

PESTS	RATE	INSTRUCTIONS
Aphids and Leafhoppers/Sharpshooters	2.4 to 3.2 fluid ounces per acre	Use higher rates when pest pressure is more severe
Japanese beetles (adults) and Thrips	4.8 to 6.4 fluid ounces per acre	Use higher rates when pest pressure is more severe
Blueberry maggot	6.4 fluid ounces per acre	

Restrictions for Bushberries: Foliar

- Pre-Harvest Interval (PHI): 3 days
- Minimum interval between applications : 7 days
- Maximum IMIDACLOPRID 2FL allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/A)
- Maximum number of IMIDACLOPRID 2FL 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 foraging.

BUSHBERRIES - Soil

PESTS	RATE	INSTRUCTIONS
Japanese beetle (adults, feeding on foliage) White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and Oriental beetle	16.0 – 32.0 fl oz/A	Use one of the following methods to apply specified dosage of IMIDACLOPRID 2FL: 1. Chemigation into root-zone by means of low-pressure drip, trickle, micro-sprinkler or equivalent equipment; 2. 18-inch band on each side of the row follow with 0.25" of irrigation immediately after application.
• Apply ½ to 1" of irrigation water or rainfall within 24 hours of application to facilitate movement into the soil and into the root-zone. Apply IMIDACLOPRID 2FL to moist soil. If necessary, apply one hour of irrigation water immediately before application of IMIDACLOPRID 2FL. • **Grubs:** For best grub control, apply IMIDACLOPRID 2FL to controls 1st or 2nd instar larvae. Make application post-bloom up to 7 days before harvest, or post-harvest until October 1st. • **Japanese beetle larvae:** apply from June 1 to July 15. • Apply to grass covered rows, row middles, drive lanes, headlands, and other grassy areas in and around the berry field to control resident grub populations. Applications directed to the root-zone will help protect berry plant roots from grub feeding.		

Restrictions for Bushberries: Soil

- Pre-Harvest Interval (PHI): 7 days
- Do not apply more than 32.0 fl oz (0.50 lb ai)/A IMIDACLOPRID 2FL per year.
- Do not apply pre-bloom or during bloom or when bees are foraging.

CITRUS

Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo and tangor),

Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Tangelo, Satsuma mandarin, and other cultivars and/or hybrids of these.

CITRUS - Foliar

Pests Controlled	Rate fluid ounces/100 gal.	Rate fluid ounces/Acre
Aphids Black fly Leafhoppers/Sharpshooters Leafminers Mealy bugs Scales Whiteflies	2.8 – 4.0 (for dilute applications)	8.0 – 16.0 (depending on tree size, target pest and infestation pressure)
Thrips (Suppression only)	2.8 – 4.0	8.0 – 16.0
• Aerial application of IMIDACLOPRID 2FL may result in slower activity and reduced control to results from ground application. 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. • **Scales** - time applications to the crawler stage. Treat each generation.		

Restrictions for Citrus: Foliar

- PreHarvest Interval (PHI): 0 days
- Minimum interval between applications: 10 days
- Maximum IMIDACLOPRID 2FLallowed per year: 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 foraging.

CITRUS - Soil

PESTS	RATE	INSTRUCTIONS
Controlled: Aphids Asian citrus pysllid Black fly Citrus leafminer Leafhoppers/Sharp-sh ooters Mealybugs Sales Termites (FL only) Whiteflies **Suppressed:** Symptoms of: Citrus tristeza virus (CTV) through vector control Citrus yellows Thrips (foliage feeding thrips only)	16.0 – 32.0 fl oz/A 32.0 fl oz/A	Apply specified rate of IMIDACLOPRID 2FL using one of the following methods: 1. Chemigation into root-zone by means of low-pressure drip, trickle, micro-sprinkler or equivalent equipment. For best results, apply to newly planted trees or those previously trained to drip, trickle, or micro-sprinkler irrigation. Lightly pre-wet the soil to break soil surface tension before applying IMIDACLOPRID 2FL. Chemigation application can be made separate to normal irrigation but should be followed by 10 to 20 minutes of additional watering to move IMIDACLOPRID 2FL into the 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 for tress up to 8 feet tall.
• For control of existing termite infestations, apply specified dosage in 1 – 4 quarts of total solution volume, depending on size of tree, as a drench application to the basal portion of the tree trunk and surround soil in the immediate vicinity of the tree trunk.		

Restrictions for Citrus: Soil

- Pre-Harvest Interval (PHI): 0 days
- Do not apply more than 32.0 fl oz (0.50 lb ai)/A IMIDACLOPRID 2FL per year.
- Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

CITRUS (Containerized)

PESTS	RATE	INSTRUCTIONS
Controlled: Aphids Asian citrus psyllid Black fly Citrus leafminer Leafhoppers/Sharp-shooters Mealybugs Scales Whiteflies	0.75 mL/ft^3 container media	Determine volume of container and Calculate required dosage based on 0.50 mls/0.1 ft^3 potting media. Apply calculated dosage per container as described above. Do not exceed rate of 3.0 mls / plant per crop season regardless of container size. Apply calculated dosage of IMIDACLOPRID 2FL 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 best results, make treatment at planting before insect infestation occurs. Retreat if necessary. **Citrus root weevil complex (larvae):** apply before neonate larvae enter potting media. Use the higher specified rate for heavy infestations. **RESTRICTIONS:** Maximum rate is 2.50 ml/ft^3 container media. Do not apply immediately prior to bud opening or during bloom or when bees are foraging.
Citrus Root weevil (larval complex)	1.25 – 2.50 ml/ft^3 container media	
Suppressed: Citrus thrips	2.50 mL/ft^3 container media	

CRANBERRIES - Soil

PESTS	RATE	INSTRUCTIONS
Rootgrubs (scarabaeiae) Rootworms (chrysomelidae)	16.0-32.0 fl oz/A	Apply IMIDACLOPRID 2FL to moist soil. Apply specified rate of IMIDACLOPRID 2FL using one of the following methods: 1. As a soil spray (ground application) directed to the root and crown area using at least 20 gal of water per acre; 2. As a chemigation application with 600 to 1000 gal water.
• Immediately upon application, incorporate IMIDACLOPRID 2FL into root-zone by 0.1"–0.3" 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:** Apply post-bloom immediately after bees are removed. Target applications for early instar larvae. • IMIDACLOPRID 2FL 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 IMIDACLOPRID 2FL and the desired fungicides or insecticide partner at labeled rates and apply to a small area. Evaluate crop response within 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.

Restrictions for Cranberries: Soil
- Pre-Harvest Interval (PHI): 30 days
- Do not apply more than 32.0 fl oz (0.50 lb ai)/A IMIDACLOPRID 2FL per year.
- Do not apply immediately pre-bloom or during bloom or when bees are foraging.

GRAPE – Foliar American bunch grape, Muscadine grape and Viniferous grape

PESTS	RATE	INSTRUCTIONS
Leafhoppers/Sharpshooters and Mealybugs	2.4 to 3.0 fluid ounces per acre	Use higher rates within the specified rate range when pest pressure is more severe
Grapeleaf skeletonizer	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.		

Restrictions for Grapes: Foliar
- Pre-Harvest Interval (PHI): 0 days
- Minimum interval between applications: 14 days
- Maximum IMIDACLOPRID 2FL allowed per year: 6.0 fluid ounces/Acre (0.1 lb. AI/A)

GRAPE – Soil

PESTS	RATE	INSTRUCTIONS
Controlled: Mealybugs Leafhoppers/ Sharpshooters *Phylloxera** spp. **Suppressed:** Pierce's disease	16.0 – 32.0 fl oz/A 24.0 – 32.0 fl oz/A	Apply specified dosage of IMIDACLOPRID 2FL using one of the following methods: 1. Chemigation into root-zone by means of 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 best results, apply between bud-break and the pea-berry stage. • *Repeated and regular use of IMIDACLOPRID 2FL over several, consecutive growing seasons controls existing *Phylloxera* infestations over time or prevents *Phylloxera* from becoming established.		

Restrictions for Grapes: Soil
- Pre-Harvest Interval (PHI): 30 days
- Do not apply more than 32.0 fl oz (0.50 lb)/A IMIDACLOPRID 2FL per year.

HOPS – Foliar

PESTS	RATE	INSTRUCTIONS
Aphids	6.4 fluid ounces per acre	

Restrictions for Hops: Foliar
- Pre-Harvest Interval (PHI): 28 days
- Minimum interval between applications: 21 days
- Maximum IMIDACLOPRID 2FL allowed per year: 19.2 fluid ounces/Acre (0.30 lb. AI/A)

HOPS – Soil

PESTS	RATE	INSTRUCTIONS
Aphids	19.2 fl oz/A	Apply specified dosage of IMIDACLOPRID 2FL using one of the following methods: 1. Chemigation into root-zone by means of 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.

Restrictions for Hops: Soil
- Pre-Harvest Interval (PHI): 60 day
- Do not apply more than 19.2 fl oz (0.3 lb ai)/A IMIDACLOPRID 2FL per year.
- Not for use in California unless directed by state specific 24(c) labeling.

TREE NUTS, except Almonds

Crops of Crop Group 14, except Almonds including: Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut [Black and English].

TREE NUTS - Foliar

PESTS	RATE	INSTRUCTIONS
Aphids, Phylloxera and Spittlebugs	2.8 to 5.6 fluid ounces per acre	Use higher rate within the specified rate range for Black pecan aphid.

Restrictions for Tree Nuts: Foliar
- Do not apply after shuck split.
- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 6 days
- Maximum IMIDACLOPRID 2FL allowed per year: 22.4 fluid ounces/Acre (0.35 lb. AI/A)
- Minimum application volume (water): 50 GPA — ground application, 25 GPA — aerial application.
- Do not apply pre-bloom or during bloom or when bees are foraging.
- Do not apply to Almond trees.

TREE NUTS - Soil

PESTS	RATE	INSTRUCTIONS
Controlled: Aphids Two-lined spittlebug **Supressed:** Pecan scab (from reduction in honey deposition	16.0 – 32.0 fl oz/A	Apply specified rate of IMIDACLOPRID 2FL using one of the following methods: 1. Chemigation to root-zone by means of low-pressure drip, trickle, micro-sprinkler or equivalent equipment; 2. Emitter or spot application in a minimum of 4 fluid ounces of mixture per emitter site; 3. Subsurface side-dress shanked into the root-zone near emitter line. Treat distance, wetted by the emitter set of each tree.

• Applications may be made from May 15 until July 15. Applications made later in the season may be less effective.
• Apply product to slightly moist soil and allow soil to dry before additional irrigation.

Restrictions for Tree Nuts: Soil
• Pre-Harvest Interval (PHI): 7 days
• Do not apply more than 32.0 fl oz (0.50 lb ai)/A IMIDACLOPRID 2FL per year.
• Do not apply pre-bloom or during bloom or when bees are foraging.
• Do not apply to Almond trees.
• Not for use in California unless directed by state specific 24(c) labeling.

POME FRUIT - Apple, Crabapple. Loquat, Mayhaw, Pear (including Oriental pear), Quince

POME FRUIT - Foliar

Pests Controlled	Rate fluid ounces/100 gal.	Rate fluid ounces/Acre
Leafhoppers	0.8 - 1.6	3.2 – 6.4
Aphids (except woolly apple aphid) Leafminers San Jose scale	1.6	6.4
FOR PEAR, ONLY Mealybugs Pear psylla	4.0	16.0

• Aerial application of IMIDACLOPRID 2FL may result in slower activity and reduced control compared to ground application due to less thorough coverage.
• **Leafhoppers** - apply low rate as specified for low to moderate populations of white apple leafhoppers and high specified rate for high populations or for other leafhopper species. Apply IMIDACLOPRID 2FLwhile most ieafhoppers 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 2FLwill 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 leaf rolling caused by rosy apple aphid.
• **San Jose scale** - time applications to the crawler stage. Treat each generation.
• The amount of IMIDACLOPRID 2FL 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 per acre as would be applied in a dilute spray based on tree size and foliage volume.

Restrictions for Pome Fruits: Foliar
• Pre-Harvest Interval (PHI): 7 days
• Minimum interval between applications: 10 days
• Maximum IMIDACLOPRID 2FLallowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/A)
• Do not apply pre-bloom or during bloom or when bees are foraging.

POME FRUITS - Soil

PESTS	RATE	INSTRUCTIONS
Aphids (including wooly apple aphid) Leafhoppers	16.0 – 24.0 fl oz/A	Apply specified dosage of IMIDACLOPRID 2FL through chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.

Restrictions for Pome Fruits: Soil

- Pre-Harvest Interval (PHI): 21 days
- Do not apply more than 24.0 fl oz (0.38 lb.) ai/A IMIDACLOPRID 2FL per year.
- Not for use in California unless directed by state specific 24(c) labeling.
- Do not apply immediately prior to bud opening or during bloom or when bees are foraging.

STONE FRUIT - Apricot, Cherry (including sweet and tart), nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune

STONE FRUIT - Foliar

Pests Controlled	Rate fluid ounces/100 gal.	Rate fluid ounces/Acre
Aphids Green June beetle Japanese beetle Leafhoppers/Sharpshooters Plant bugs Rose chafer San Jose scale	1.6	3.2 – 6.4
Cherry fruit fly (maggot of Eastern and Western)	1.6	4.8 - 6.4
Pests Suppressed		
Plum curculio Stink bugs	1.6	6.4
Aerial application of IMIDACLOPRID 2FL may result in slower activity and reduced control relative to results from ground application.		

Restrictions for Apricot, Nectarine and Peach: Foliar

- Pre-Harvest Interval (PHI): 0 day
- Minimum interval between applications: 7 days
- Maximum IMIDACLOPRID 2FL allowed per year: 19.2 fluid ounces/Acre (0.30 lbs. AI/A)
- Minimum application volume (water): 50 GPA-ground application: 25 GPA— aerial application
- Do not apply pre-bloom or during bloom or when bees are foraging.

Restrictions for Cherries, Plums, Plumcot and Prune: Foliar

- Pre-Harvest Interval (PHI): 7 day
- Minimum interval between applications: 10 days
- Maximum IMIDACLOPRID 2FL allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/A)
- Minimum application volume (water): 50 GPA-ground application: 25 GPA— aerial application
- Do not apply pre-bloom or during bloom or when bees are foraging.

STONE FRUIT - Soil

PESTS	RATE	INSTRUCTIONS
Aphids (including wooly apple aphid) Leafhoppers	16.0 – 24.0 fl oz/A	Apply specified dosage of IMIDACLOPRID 2FL by chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.

Restrictions for Stone Fruit: Soil

- Pre-Harvest Interval (PHI): 21 days
- Do not apply more than 24.0 fl oz (0.38 lb ai)/A IMIDACLOPRID 2FL per year.
- Do not apply immediately prior to bud opening or during bloom or when bees are foraging.

Pre-Plant Root Dip Application

PESTS	RATE	INSTRUCTIONS
Black peach aphid (infesting roots)	2.0 fl oz/10 gal root-dip solution	Mix IMIDACLOPRID 2FL at specifed rate per 10 gallons of water. Completely wet bare-root transplant to slightly above the graft union by soaking them in the IMIDACLOPRID 2FL solution for up to 5 minutes. Allow solution to dry on roots then transplant trees as soon as possible following treatment.

TROPICAL FRUIT - 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.

TROPICAL FRUIT – Foliar

PESTS	RATE	INSTRUCTIONS
Aphids, Leafhoppers/Sharpshooters, Thrips, and Whiteflies and Suppression of Scales	6.4 fluid ounces per acre	
Aerial application of IMIDACLOPRID 2FL may result in slower activity and reduced control compared to ground application due to less thorough coverage.		

Restrictions for Tropical Fruit: Foliar

- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 10 days
- Maximum IMIDACLOPRID 2FL allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/A)
- Do not apply pre-bloom or during bloom or when bees are foraging.
- Do not apply immediately prior to bud opening or during bloom or when bees are foraging.

TROPICAL FRUIT - Soil

PESTS	RATE	INSTRUCTIONS
Controlled: Aphids Leafhoppers Whiteflies	24.0 – 32.0 fl oz/A	Apply specified rate of IMIDACLOPRID 2FL by chemigation through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
Suppressed: Scales	32.0 fl oz/A	

Restrictions for Tropical Fruit: Soil

- Pre-Harvest Interval (PHI): 6 days

Do not apply more than 32.0 fl oz (0.50 lb ai)/A IMIDACLOPRID 2FL per year.
• Not for use in California unless directed by state specific 24(c) labeling.

POPLAR/COTTONWOOD - Foliar (includes members of the genus Populus grown for pulp or timber)

PESTS	RATE	INSTRUCTIONS
Aphids and Leaf beetles	3.2 to 6.4 fluid ounces per acre	Use higher rate within the specified rate range when pest pressure is more severe
Aerial application of IMIDACLOPRID 2FL may result in slower activity and reduced control compared to ground application due to less thorough coverage.		

Restrictions for Poplar/Cottonwood: Foliar
• Pre-Harvest Interval (PHI): 7 days
• Minimum interval between applications: 10 days
• Maximum IMIDACLOPRID 2FL allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/A)
• Do not apply pre-bloom or during bloom or when bees are foraging.
• Use not permitted in California unless otherwise directed by state specific 24(c) labeling

POPLAR/COTTONWOOD - Soil

PESTS	RATE	INSTRUCTIONS
Controlled: Aphids Cottonwood leaf beetle **Suppressed:** *Phylloxerina popularia*	16.0 – 32.0 fl oz/A	Apply specified rate of IMIDACLOPRID 2FL by chemigation through low-pressure drip irrigation. Cottonwood leaf beetle: make application early, when the beetles first begin feeding, for best protection. Larger trees may need earlier treatment as a result of slower uptake. Phylloxerina: apply early in the year, from break of dormancy through May.

Restrictions for Poplar/Cottonwood: Soil
• Do not apply more than 32.0 fl oz (0.50 lb ai)/A IMIDACLOPRID 2FL per year.
• Not for use in California unless directed by state specific 24(c) labeling.
• Do not apply immediately prior to bud opening or during bloom or when bees are foraging.

CHRISTMAS TREE - Foliar

PESTS	RATE	INSTRUCTIONS
Aphids, Adelgids and Sawflies	3.2 to 6.4 fluid ounces per acre	Use higher rate within the specified rate range when pest pressure is more severe
• Aerial application of IMIDACLOPRID 2FL 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 effective.		

Restrictions for Christmas Trees: Foliar
• Pre-Harvest Interval (PHI): 7 days
• Minimum interval between applications: 7 days
• Maximum IMIDACLOPRID 2FL allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/A)
• Not for use in California unless directed by state specific 24(c)labeling.

IMPORTANT INFORMATION READ BEFORE USING PRODUCTS
CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY NOTICE:
Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded. The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of KAIZEN TECHNOLOGIES LLC or Seller, All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold KAIZEN TECHNOLOGIES LLC and Seller harmless for any claims relating to such factors.

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