

1/8/2014

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



OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

JAN 08 2014

Danielle Erding  
Winfield Solutions, LLC  
P.O. Box 64589  
St. Paul, MN 55164

Subject: Amended label adding pollinator protection language  
Product: Imidacloprid 2F T&O Insecticide  
EPA Reg. No. 1381-232  
Submission dated September 3, 2013

Dear Ms. Erding:

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 Autumn Metzger at 703-504-5314 or [metzger.autumn@epa.gov](mailto:metzger.autumn@epa.gov).

Regards,

A handwritten signature in black ink, appearing to read "Venus Eagle", with a date stamp "JAN 08 2014" written over it.

Venus Eagle, Product Manager (01)  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

2/13

# Imidacloprid 2F T&O Insecticide

Systemic and foliar insect control on turfgrass (including sod farms), grassy areas in nurseries, ornamentals, groundcovers, interior landscapes, and fruit and nut trees.

## 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

**PRECAUCION AL USUARIO:** Si usted no puede leer o entender inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

**(TO THE USER:** If you cannot read or understand English, do not use this product until the label has been fully explained to you.)

FIRST AID	
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 the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
If inhaled:	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</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 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If in eyes:	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 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>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-424-7452 for emergency medical treatment information.	
NOTE TO PHYSICIAN	
No specific antidote is available. Treat the patient symptomatically.	

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Keep children or pets away from treated area until dry.

EPA Reg. No. 1381-232

**Distributed By:**  
Winfield Solutions, LLC  
P.O. Box 64089  
St. Paul, MN 55164-0089

**WINFIELD**

ACCEPTED

JAN 08 2014

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

EPA Est. No.

NET CONTENTS: 2.5 Gallons\_\_\_\_\_

Lot No. \_\_\_\_\_

1/0102/4

EPA. Reg. No: 1381-232

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes plus socks
- Protective eyewear when working in a non-ventilated space.

Follow manufacturer's instructions for cleaning/maintaining PPE. If instructions for washables do not exist, 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

#### 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 this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS

This product is highly toxic to aquatic invertebrates. Do not apply directly to water, or to 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 the foliage of blooming crops, plants or weeds. Do not apply this product or allow it to drift to blooming crops, plants or weeds if bees are foraging the treatment area.

This product is toxic to wildlife.

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. 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](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at: [beekill@epa.gov](mailto:beekill@epa.gov)

## DIRECTIONS FOR USE

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

See individual sites for specific pollinator protection application restrictions. If none exist under the specific site, for outdoor foliar applications, follow these application directions



Do not apply Imidacloprid 2F T&O Insecticide while bees are foraging. Do not apply Imidacloprid 2F T&O Insecticide to plants that are flowering. Only apply after all flower petals have fallen off.

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 formulate this product into other end-use products**

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal

protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

**Exception:** If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

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

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses.

- Keep children and pets off treated areas until dry.

### 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:** Use label language appropriate for container size and type.

**Nonrefillable containers.** Do not reuse or refill this container. Clean container promptly after emptying.

**Nonrefillable container equal to or less than 5 gallons.** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  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. 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.

**Nonrefillable container greater than 5 gallons.** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  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. Turn the container over onto its other 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. 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.

**Refillable container.** 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. 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.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident,  
call CHEMTREC 1-800-424-9300.

**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 PONDS.**

#### **RUNOFF MANAGEMENT**

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

#### **ENDANGERED SPECIES NOTICE**

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

#### **RESISTANCE MANAGEMENT**

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

Imidacloprid 2F T&O Insecticide contains a Group 4A insecticide called imidacloprid. Insect biotypes with acquired or inherent tolerance to group 4A products may eventually dominate the insect population if Group 4A products are used repeatedly as the predominant method of control for targeted species. This may eventually result in partial or total loss of control of those species by Imidacloprid 2F T&O Insecticide and to other Group 4A products.

The active ingredient in Imidacloprid 2F T&O Insecticide is a member of the neonicotinoid chemical group. Avoid using a block of more than three consecutive applications of Imidacloprid 2F T&O Insecticide and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, Winfield Solutions, LLC strongly encourages the rotation to a block of applications with effective products of a different mode before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with other IPM practices, is considered an effective use strategy for preventing or delaying an insect pest's ability to develop resistance to this class of chemistry.

Foliar applications of Imidacloprid 2F T&O Insecticide or other Group 4A products from the neonicotinoid chemical class should not be used on crops previously treated with long-residual, soil-applied products from the neonicotinoid chemical class.

Other Group 4A, neonicotinoid products used as foliar treatments include: Actara®, Assail®, Calypso®, Centric®, Intruder™, Leverage® and Trimax™. Other 4A Group, neonicotinoid products used as soil treatment include: Admire® and Platinum®.

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

#### **USE INFORMATION**

Thorough uniform coverage is necessary to achieve optimal control. A spray adjuvant may be used to improve coverage. Imidacloprid 2F T&O Insecticide may not knockdown established and heavy insect populations. Two applications may be required to achieve control; retreat if needed and as directed on this label. Imidacloprid 2F T&O Insecticide may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

#### **MIXING INSTRUCTIONS**

To prepare the application mixture, add a portion of the required amount of water to the spray tank, begin agitation, and add the Imidacloprid 2F T&O Insecticide. Complete filling tank with the balance of water needed. Be sure to maintain agitation during both mixing and application.

Imidacloprid 2F T&O Insecticide may also be used with other pesticides and/or fertilizer solutions; refer to the **Compatibility Information** below. When tank mixtures of Imidacloprid 2F T&O Insecticide and other pesticides are involved, prepare the tank mixture as recommended above and follow the suggested Mixing Order below.

### Mixing Order

When pesticide mixtures are needed, add wettable powders first, Imidacloprid 2F T&O Insecticide or other flowables second, and emulsifiable concentrates last. Ensure good agitation as each component is added and do not add an additional component until the previous is thoroughly mixed. A fertilizer / pesticide compatibility agent may be needed if a fertilizer solution is to be added to the mixture. Be sure to maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

### Compatibility

Before adding Imidacloprid 2F T&O Insecticide to the spray or mix tank, the compatibility of the intended tank mixture should be checked using the following test:

- 1) Add proportionate amount of each ingredient in the appropriate order to a pint or a quart jar;
- 2) Cap and shake for 5 minutes;
- 3) Let set for 5 minutes.

Poor mixing or formation of precipitates that do not readily re-disperse indicates an incompatible mixture that should not be used. For further information, contact your local Winfield Solutions, LLC representative.

## APPLICATION INSTRUCTIONS

Apply Imidacloprid 2F T&O Insecticide as a directed or broadcast foliar spray using properly calibrated ground application equipment as allowed in the specific recommended application section. For optimum insecticidal efficacy, thorough coverage of all target foliage *without runoff* is necessary. To obtain thorough coverage use adequate spray volumes, properly calibrated application equipment and a spray adjuvant if necessary. Failure to provide adequate coverage and retention of Imidacloprid 2F T&O Insecticide on leaves and fruit, if present, may result in loss of insect control or delay in onset of activity.

### SPRAY DRIFT MANAGEMENT

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

#### Mixing and Loading Requirements

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

#### 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

*Because the potential for spray drift is high during temperature inversions, do NOT make ground applications 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.

## No-Spray Zone Requirements for Foliar Applications

Do not apply by ground within 25 feet of lakes; reservoirs; rivers; permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds.

## TURFGRASS

Imidacloprid 2F T&O Insecticide will control listed soil-inhabiting pests in grassy areas such as home lawns, business and office complexes, shopping complexes, multi-family residential complexes, golf courses, airports, cemeteries, parks, playgrounds, and athletic fields and sod farms. The need for an application can be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. Applications may be made preceding the egg laying activity of the target pests and high levels of control may be achieved when applications are made proceeding or during the egg laying period. For best results, make applications prior to egg hatch of the target pests, followed by sufficient irrigation or rainfall to move the active ingredient through the thatch.

### Restrictions for Turfgrass:

- Applications must NOT exceed a total of 1.6 pt. (0.4 lb of active ingredient) per acre per year.
- Keep people and pets off treated areas until dry.
- Do NOT apply through any type of irrigation system.
- Do NOT graze treated areas or use clippings from treated areas for feed or forage.
- Do NOT apply when grassy areas are waterlogged or the soil is saturated with water because adequate distribution of the active ingredient cannot be achieved when these conditions exist.
- Do NOT allow runoff or puddling of irrigation water following application.
- Do NOT allow leachate to run out for the first 10 days after application or reduced efficacy may result.
- The treated grassy area must be in such a condition that the rainfall or irrigation will penetrate vertically in the soil profile.
- Do NOT mow treated areas until after sufficient rainfall or irrigation has occurred in order to maintain the uniformity of the application.
- Do NOT use for seed production.

### Application Instructions:

Apply Imidacloprid 2F T&O Insecticide in sufficient water to provide adequate distribution in the treated area. Use of accurately calibrated equipment normally used for soil application of insecticides is required. Use equipment which will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off-target drift. Check calibration periodically to ensure that equipment is working properly.

Pest	Fluid ounces per 1000 sq. ft.	Pints per Acre	Specific Instructions
Larvae of: Annual bluegrass weevil Asiatic garden beetle Billbugs Black turfgrass ataenius Cutworms <sup>†</sup> European Chafer Green June beetle Japanese beetle Northern masked chafer Oriental beetle <i>Phyllophaga</i> spp. Southern masked chafer	0.46 – 0.6 (14 to 17 mL)	1.25 – 1.60	<b>Grubs, European Crane Fly, billbugs and annual bluegrass weevil:</b> For best results make applications prior to egg hatch of the target pest. <b>Chinchbugs:</b> Make applications prior to the hatching of the first instar nymphs. <b>Mole Crickets:</b> Make applications prior to or during the peak egg hatching period. When adults or large nymphs are present and actively tunneling, Imidacloprid 2F T&O Insecticide should be accompanied by a curative insecticide. NOTE: For best results, the active ingredient must be moved through the thatch by irrigation or rainfall occurring within 24 hours after application.
Chinchbugs <sup>†</sup> Mole Crickets	0.60 (17 mL)	1.60	

<sup>†</sup> Suppression only.



## APPLICATION TO GRASSY AREAS IN NURSERIES

Imidacloprid 2F T&O Insecticide will control listed soil-inhabiting pests in grassy areas in or around nurseries such as under or around field or container grown plants or other grassy areas. The need for an application can be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. Applications may be made preceding the egg laying activity of the target pests and high levels of control may be achieved when applications are made proceeding or during the egg laying period. For best results, make applications prior to egg hatch of the target pests, followed by sufficient irrigation or rainfall to move the active ingredient through the thatch.

### Restrictions for Grassy Areas in Nurseries:

- Applications must NOT exceed a total of 1.6 pt. (0.4 lb of active ingredient) per acre per year.
- Do NOT apply when grassy areas are waterlogged or the soil is saturated with water because adequate distribution of the active ingredient cannot be achieved when these conditions exist.
- The treated grassy area must be in such a condition that rainfall or irrigation will penetrate vertically in the soil profile.
- Do NOT mow treated until after sufficient rainfall or irrigation has occurred in order to maintain the uniformity of the application.
- Do NOT graze treated areas or use clippings from treated areas for feed or forage.
- Do NOT apply Imidacloprid 2F T&O Insecticide to soils that are waterlogged or saturated and avoid runoff or puddling of irrigation water following application.
- Do NOT allow leachate to run out for the first 10 days after application or reduced efficacy may result.

### Application Instructions:

Apply Imidacloprid 2F T&O Insecticide in sufficient water to provide adequate distribution in the treated area. Use of accurately calibrated equipment normally used for soil application of insecticides is required. Use equipment which will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off-target drift. Check calibration periodically to ensure that equipment is working properly.

Pest	Fluid ounces per 1000 sq. ft.	Fluid ounces per Acre	Specific Instructions
Larvae of: Annual bluegrass weevil Asiatic garden beetle Billbugs Black turfgrass ataenius Cutworms <sup>†</sup> European Chafer Green June beetle Japanese beetle Northern masked chafer Oriental beetle <i>Phyllophaga</i> spp. Southern masked chafer	0.45 – 0.6 (14 to 17 mL)	19.2 – 25.6	<b>Billbugs and annual bluegrass weevil:</b> For best results make applications prior to egg hatch of the target pest. <b>Chinchbugs:</b> Make applications prior to the hatching of the first instar nymphs. <b>Mole Crickets:</b> Make applications prior to or during the peak egg hatching period. When adults or large nymphs are present and actively tunneling, Imidacloprid 2F T&O Insecticide should be accompanied by a curative insecticide.  NOTE: For best results, the active ingredient must be moved through the thatch by irrigation or rainfall occurring within 24 hours after application.
Chinchbugs <sup>†</sup> Mole Crickets	0.57 (17 mL)	25.6	
<sup>†</sup> Suppression only.			

## ORNAMENTALS, GROUNDCOVERS AND INTERIOR PLANTSCAPES

Imidacloprid 2F T&O Insecticide is a systemic insecticide that may be applied to ornamentals, groundcovers and interior plantscapes in and around industrial and commercial buildings and residential areas. The insecticide is translocated upward into the plant system and for best results must be placed where the growing portions of the target plant can absorb the active ingredient. When applicable, adding a fertilizer containing nitrogen into the spray solution may enhance plant uptake of Imidacloprid 2F T&O Insecticide.

### Ant Management Programs:

Imidacloprid 2F T&O Insecticide may be used to limit the honeydew available as a food source for ant populations when controlling aphids, scale insects, mealy bugs and other sucking pests on ornamentals. Imidacloprid 2F T&O Insecticide applications may be supplemented with bait traps, residual sprays and other methods to further reduce the unwanted ant population.

### Woody Perennials:

Protection in woody perennials is slower than in herbaceous species and a delay of 2 or more weeks should be expected, with longer delays for larger plants. Because of this, applications to woody perennials should be made well in advance of expected insect activity.

### Bark Media:

Imidacloprid 2F T&O Insecticide treatments to media with 30 - 50% or more bark content may confer a shorter period of protection.

### Restrictions for Ornamentals, Groundcovers and Interior Plantscapes:

- Keep people and pets off treated areas until dry.
- Do NOT apply through any type of irrigation system.
- Cover crops for soil building or erosion control may be planted at any time, but do not graze or harvest for food or feed. Do NOT graze treated areas or use clippings from treated areas for feed or forage.
- Do NOT apply Imidacloprid 2F T&O Insecticide to soils that are waterlogged or saturated and avoid runoff or puddling of irrigation water following application.
- Do NOT allow leachate to run out for the first 10 days after application or reduced efficacy may result.
- Do NOT exceed a total of 1.6 pt. / Acre per year (0.4 lb. AI/A) for outdoor applications grown in the ground.

### FOLIAR AND BROADCAST APPLICATIONS

Imidacloprid 2F T&O Insecticide may be applied as a broadcast or foliar application to trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, foliage plants, ground covers, interior plantscapes and vegetable plants intended for resale.

### Application Instructions:

Apply Imidacloprid 2F T&O Insecticide in sufficient water to provide adequate distribution in the treated area. Use of accurately calibrated equipment normally used for soil application of insecticides is required. Use equipment which will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off-target drift. Check calibration periodically to ensure that equipment is working properly.

NOTE: When making foliar applications to plants with hard-to-wet foliage such as holly, pine or ivy, use of a spreader / sticker is recommended.

Pest	Application Method	Application Rate	Specific Instructions
Adelgids Aphids Japanese beetle (adult) Lacebugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Sawfly larvae Thrips <sup>†</sup> Whiteflies	Foliar	1.5 fl. oz. (45 mL) per 100 gal. of water	Make applications prior to establishment of large pest populations and retreat as necessary. Applying Imidacloprid 2F T&O Insecticide foliarly after a soil application in the same crop is not recommended for resistance management purposes.

White grub larvae (such as Japanese beetle larvae, chafer, <i>Phyllophaga</i> spp., Asiatic garden beetle and Oriental beetle)	Broadcast	0.46 – 0.60 fl. oz. (14 to 17 mL) per 1000 sq. ft.	Mix the recommended amount of Imidacloprid 2F T&O Insecticide in sufficient water to uniformly cover the area being treated using at least 2 gallons of water per 1000 sq. ft. For best results, incorporate the Imidacloprid 2F T&O Insecticide into the upper soil profile by irrigating after the application is made.
† Suppression only.			

### SOIL INJECTION AND DRENCH APPLICATIONS

Application Site	Rate	Application Instructions	Pests Controlled
Trees  NOTE: Application to trees already heavily infested may not prevent the eventual loss of the trees due to existing pest damage and tree stress.	0.1 – 0.2 fl. oz. (3 to 6 mL) per inch of trunk diameter (DBH)	<b>SOIL INJECTION – No Soil Injection Application allowed in Nassau or Suffolk counties of New York.</b>  GRID SYSTEM: Holes should be spaced on 2.5 ft centers, in a grid pattern, extending to the drip line of the tree.  CIRCLE SYSTEM: Apply in holes evenly spaced in circles, (use more than one circle dependent upon the size of the tree) beneath the drip line of the tree extending in from that line.  BASAL SYSTEM: Space injection holes evenly around the base of the tree trunk no more than 6 to 12 inches out from the base.  Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. For optimum control, keep the treated area moist for 7 to 10 days. Do not use less than 4 holes per tree.	Adelgids Aphids Armored Scale† Black vine weevil larvae Eucalyptus Longhorned Borers Flatheaded Borers (including bronze birch and alder borers) Japanese Beetles (adults) Lacebugs
		<b>SOIL DRENCH:</b> Remove plastic or any other barrier that will stop solution from reaching the root zone. Uniformly apply around the base of the tree, direct to the root zone as a drench in no less than 10 gallons of water per 1000 square feet.	Leaf Beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter)
Shrubs	0.1 – 0.2 fl. oz. (3 to 6 mL) per foot of shrub height	<b>SOIL INJECTION – No Soil Injection Application allowed in Nassau or Suffolk counties of New York.</b>  Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Using a minimum of 4 holes per shrub, apply to individual plants maintaining a low pressure and use sufficient solution for distribution of the liquid into the treatment zone.  Keep the treated area moist for 7 to 10 days.	Leafminers Mealybugs Pine Tip Moth larvae Psyllids Royal Palm Bugs
		<b>SOIL DRENCH:</b> Remove plastic or any other barrier that will stop solution from reaching the root zone. Uniformly apply around the base of the tree, direct to the root zone as a drench in no less than 10 gallons of water per 1000 square feet.	Sawfly larvae Soft Scales Thrips† White grub larvae Whiteflies
Flowers and Ground Cover	0.46 - 0.60 fl. oz. (14 to 17 mL) per 1000 sq. ft.	Apply as a broadcast treatment and incorporate into the soil before planting or apply after plants are established. If application is made to established plants, optimum control will be attained if area is irrigated thoroughly after application.	
† Suppression only of these species.			

### POME FRUIT IN AND AROUND RESIDENTIAL AREAS

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

- Pre-Harvest Interval (PHI): 7 days
- Reapplication Interval: At least 10 days
- Maximum Applications per Year: 5
- Do NOT apply through any type of irrigation system.
- Applications must NOT exceed a total of 1.6 pts. (0.4 lb of active ingredient) per acre per year.

Pest	Fluid ounces per 100 gal.	Fluid ounces per Acre <sup>‡</sup>	Specific Instructions
Aphids (except Woolly apple aphid) Leafhoppers (including glassy-winged sharpshooter) Leafminer Mealybugs <sup>†</sup> San Jose Scale <sup>†</sup>	1.5 (45 mL)	6.0	<p>Apply as a foliar spray as needed after petal-fall is complete.</p> <p><b>Rosy Apple Aphid:</b> Apply prior to leaf rolling caused by the pest.</p> <p><b>Leafhopper:</b> For late season (preharvest) control apply while most leafhoppers are in the nymphal stage.</p> <p><b>Leafminer:</b> Make first application as soon as petal-fall is complete for control of first generation, with best results occurring when the application is made at the earliest possible time.</p> <p>For succeeding generations, best results occur when applications are made early in the adult flight against egg and early instar larvae. If generations are overlapping or severe pressure continues, a second application may be necessary after 10 days. A single application may result in suppression only. NOTE: Imidacloprid 2F T&amp;O Insecticide will not control late stage larvae.</p> <p><b>Mealybug:</b> For best results be sure to have good spray coverage of the trunk and scaffolding limbs or other nesting sites.</p> <p><b>San Jose Scale:</b> Time applications to the crawler stage and treat each generation.</p>
<sup>†</sup> Not permitted for control on pears in California. <sup>‡</sup> The amount of Imidacloprid 2F T&O Insecticide required per acre depends on tree size and volume of foliage. The listed rate per acre is based on a standard of 400 gallons of dilute spray per acre for large trees.			

## PECANS IN AND AROUND RESIDENTIAL AREAS

**NOT PERMITTED IN CALIFORNIA unless otherwise directed by State-specific 24(c) labeling**

- Pre-Harvest Interval (PHI): 7 days
- Reapplication Interval: At least 10 days
- Maximum Applications per Year: 3
- Maximum Imidacloprid 2F T&O Insecticide allowed per Year: 18 fluid ounces/Acre
- Do NOT apply through any type of irrigation system.

Pest	Fluid ounces per 100 gal.	Fluid ounces per Acre <sup>‡</sup>	Specific Instructions
Yellow pecan aphid Black margined aphid Pecan leaf phylloxera Pecan spittlebug Pecan stem phylloxera	1.5 (45 mL)	6.0	<p>Apply as a foliar spray as pest pressure builds but before infestation is extremely heavy. Two applications at a 10 – 14 day interval may be required to achieve control.</p> <p>For best results, thorough and uniform coverage is necessary. Coverage may be improved through the use of an organosilicone-based spray adjuvant.</p>
<sup>‡</sup> The amount of Imidacloprid 2F T&O Insecticide required per acre depends on tree size and volume of foliage. The listed rate per acre is based on a standard of 400 gallons of dilute spray per acre for large trees.			

## GRAPES IN AND AROUND INDUSTRIAL AND COMMERCIAL BUILDINGS AND RESIDENTIAL AREAS

- Pre-Harvest Interval (PHI): 0 days
- Reapplication Interval: At least 14 days
- Maximum Imidacloprid 2F T&O Insecticide allowed per Year: 6 fluid ounces/Acre
- Do not apply through any type of irrigation system.

Pest	Fluid ounces per 100 gal.	Fluid ounces per Acre	Specific Instructions
Leafhoppers (including glassy-winged sharpshooter) Mealybugs	1.5 (45 mL)	3.0 (90 mL/A)	Apply as a foliar spray using 200 gallons of water per acre.

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