

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs Registration Division (7505C) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460 EPA Reg. Number:

Date of Issuance:

1381-232

11/15/07

NOTICE OF PESTICIDE:

X Registration

Reregistration (under FIFRA, as amended)

Term of Issuance:
Conditional

Name of Pesticide Product:

Imidacloprid 2F T&O Insecticide

Name and Address of Registrant (include ZIP Code):

Winfield Solutions, LLC P.O. Box 64589, MS 5705 St. Paul, MN 55164-0589

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

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

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

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Venus Eagle, Product Manager (01)

Insecticide-Rodenticide Branch, Registration Division (7505P)

Date:

11/15/07

EPA Form 8570-6

- 2. Make the following label changes before you release the product for shipment:
  - a. Revise the EPA Registration Number to read, "EPA Reg. No. 1381-232."
  - b. Under the product name, make the following additions to the sentence "Systemic and foliar insect control on turfgrass, grassy areas in nurseries, ornamentals, groundcovers, interior plantscapes, and fruit and nut trees."
  - c. On pages 3 and 4, under Resistance Management and Mixing Instructions, respectively, please change the phrase "Etigra, LLC" to "Winfield Solutions, LLC."
  - d. On page 4, under Rotational Crops, change the second sentence to read: "For crops not listed on an imidacloprid label, or for crops for which no tolerance for the active ingredient have been established, a 12-month plant-back interval must be observed."
  - e. On page 6, under Application to Grassy Areas in Nurseries," delete the use site "roadways."
  - f. On page 10, in the footnotes for the two tables (Pome Fruit and Pecans), change the phrase "ET-002" to "Imidacloprid 2F T&O Insecticide."
  - g. On page 11, under Limitation of Liability, change the last sentence to read, "To the extent consistent with applicable law, buyers or user's exclusive remedy, and manufacturer's or seller's total liability shall be for damages not exceeding the cost of the product."
  - h. Throughout the label, ensure that the product name is listed correctly as "Imidacloprid 2F T&O Insecticide." It appears in no fewer than 33 instances as either "Imidacloprid 2F Turf" or "Imidacloprid 2F Ornamental."
- 3. Submit one copy of the revised final printed label for the record before you release the product for shipment.
- 4. Make the following changes to your Confidential Statement of Formulation (CSF):
  - a. Under company name and address, please list the updated information for Winfield Solutions.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

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

### Imidacloprid 2F T& O Insecticide

Systemic and foliar insect control

**ACTIVE INGREDIENT:** 

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 hava 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:	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.							
If inhaled:	Move person to fresh air.							
	• If person is not breathing, call 911 or an ambulance, then give artificial respiration,							
	preferably by mouth-to-mouth, if possible.							
lf on skin or	Take off contaminated clothing.							
clothing: • Rinse skin immediately with plenty of water for 15-20 minutes.								
Call a poison control center or doctor for treatment advice.								
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.							
	HOT LINE NUMBER							
	ct container or label with you when calling a poison control center or doctor, or going for							
treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.								
,	NOTE TO PHYSICIAN							
No specific antic	dote 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-

Manufactured for: Winfield Solutions P.O. Box 64589 St. Paul, MN 55164-0589 ACCEPTED with COMMENTS In EPA Letter Dated:

NOV 1 5 2007

Under the Federal Inscribble, Pengleide, and Redenticide Act, as amended, for the penticide registered under EPA Rep. No. EPA Est. No.

**Net Contents:** 

PROP11-13-07

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#### 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 or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

This product is toxic to wildlife.

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.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Do NOT formulate this product into other end-use products

#### **AGRICULTURAL USE REQUIRMENTS**

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.

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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 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.

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

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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 Turf 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 Turf Insecticide and to other Group 4A products.

The active ingredient in Imidacloprid 2F Turf Insecticide is a member of the neonicotinoid chemical group. Avoid using a block of more than three consecutive applications of Imidacloprid 2F Turf Insecticide and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, Etigra, LLC strongly encourages the rotation to a block of applications with effective products of a different mode before using additional applications of

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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 Turf 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<sup>®</sup>, Assail<sup>®</sup>, Calypso<sup>®</sup>, Centric<sup>®</sup>, Intruder<sup>TM</sup>, Leverage<sup>®</sup> and Trimax<sup>TM</sup>. Other 4A Group, neonicotinoid products used as soil treatment include: Admire<sup>®</sup> and Platinum<sup>®</sup>.

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/.

#### **GENERAL INFORMATION**

Thorough uniform coverage is necessary to achieve optimal control. A spray adjuvant may be used to improve coverage. Imidacloprid 2F Turf 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 Turf Insecticide may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

#### **Rotational Crops**

As soon as practical following the last application, treated areas may be replanted with any crop specified on an imidacloprid label, or any crop for which a tolerance exists for the active ingredient. For crops not listed on an imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, a 12-month plant-back interval should be observed. NOTE: Cover crops for soil building or erosion control may be planted at any time, but do not graze or harvest for food or feed.

#### 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 Turf Insecticide. Complete filling tank with the balance of water needed. Be sure to maintain agitation during both mixing and application.

Imidacloprid 2F Turf Insecticide may also be used with other pesticides and/or fertilizer solutions; refer to the **Compatibility Note** below. When tank mixtures of Imidacloprid 2F Turf 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 Turf 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 Note**

Before adding Imidacloprid 2F Turf 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 Etigra, LLC representative.

#### **APPLICATION INSTRUCTIONS**

Imidacloprid 2F Turf Insecticide should be applied 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 Turf 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. <u>Avoiding spray drift is the responsibility of the applicator</u>.

#### 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 Turf Insecticide will control 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.

#### **Use Precautions:**

- Applications must NOT exceed a total of 1.6 pt. (0.4 lb of active ingredient) per acre per year.
- Keep children 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.

- Applications should NOT be made 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.
- 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.
- The treated grassy area must be in such a condition that the rainfall or irrigation will penetrate vertically in the soil
  profile.
- Avoid mowing treated areas until after sufficient rainfall or irrigation has occurred in order to maintain the uniformity of the application.

#### **Application Instructions:**

Apply Imidacloprid 2F Turf 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† European Chafer Green June beetle Japanese beetle Northern masked chafer Oriental beetle Phyllophaga spp. Southern masked chafer	0.46 – 0.6 (14 to 17 mL)	1.25 – 1.60	Grubs, European Crane Fly, billbugs and annual bluegrass weevil: For best results make applications prior to egg hatch of the target pest.  Chinchbugs: Make applications prior to the hatching of the first instar nymphs.  Mole Crickets: Make applications prior to or during the peak egg hatching period. When adults or large nymphs are present and actively tunneling, Imidacloprid 2F Turf 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	
† Suppression only.		. ,	

#### **APPLICATION TO GRASSY AREAS IN NURSERIES**

Imidacloprid 2F Ornamental Insecticide will control soil-inhabiting pests in grassy areas in or around nurseries such as under or around field or container grown plants, on roadways 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.

#### **Use Precautions:**

- Applications must NOT exceed a total of 1.6 pt. (0.4 lb of active ingredient) per acre per year.
- Applications should NOT be made 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 the rainfall or irrigation will penetrate vertically in the soil profile.
- Avoid mowing treated areas 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 Ornamental 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 Ornamental 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.

Japanese beetle Northern masked chafer Oriental beetle Phyllophaga spp. Southern masked chafer  Cinchbugs <sup>†</sup> O.57  Data actively tunneling, Imidacloprid 2F Ornamental Insecticide should 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.	Pest	Fluid ounces per 1000 sq. ft.	Fluid ounces per Acre	Specific Instructions
25.6	Asiatic garden beetle Billbugs Black turfgrass ataenius Cutworms <sup>†</sup> European Chafer Green June beetle Japanese beetle Northern masked chafer Oriental beetle Phyllophaga spp.	*****	19.2 – 25.6	applications prior to egg hatch of the target pest.  Cinchbugs: Make applications prior to the hatching of the first instar nymphs.  Mole Crickets: Make applications prior to or during the peak egg hatching period. When adults or large nymphs are present and actively tunneling, Imidacloprid 2F Ornamental 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
Mole Crickets (1/ mL)	Cinchbugs <sup>†</sup> Mole Crickets	0.57 (17 mL)	25.6	

#### ORNAMENTALS, GROUNDCOVERS AND INTERIOR PLANTSCAPES

Imidacloprid 2F Turf 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 Turf Insecticide.

#### **Ant Management Programs:**

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

#### **Use Precautions:**

- Keep children 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.

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- Do NOT apply Imidacloprid 2F Turf 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. Al/A).

#### **FOLIAR AND BROADCAST APPLICATIONS**

Imidacloprid 2F Turf 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 Turf 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.

Method	Application Rate	Specific Instructions
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.  NOTE: Applying Imidacloprid 2F Turf Insecticide foliarly after a soil application in the same crop is not recommended for resistance management purposes.
Broadcast	0.46 – 0.60 fl. oz. (14 to 17 mL) per 1000 sq. ft.	Mix the recommended amount of Imidacloprid 2F Turf 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 Turf Insecticide into the upper soil profile by irrigating after the application is made.
		Foliar per 100 gal. of water 0.46 – 0.60 fl. oz. (14 to 17 mL)

#### SOIL INJECTION AND DRENCH APPLICATIONS

Application Site	Recommended Rate	Application Instructions	Pests Controlled
		SOIL INJECTION – No Soil Injection Application allowed in Nassau or Suffolk counties of New York.	
		GRID SYSTEM: Holes should be spaced on 2.5 ft centers, in a grid pattern, extending to the drip line of the tree.	Adelgids
Trees NOTE: Application		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.	Aphids Armored Scale <sup>†</sup>
to trees already heavily infested may	0.1 - 0.2 fl. oz. (3 to 6 mL)	BASAL SYSTEM: Space injection holes evenly around the base of the tree trunk no more than 6 to 12 inches out from the base.	Black vine weevil larvae Eucalyptus Longhorned Borers
not prevent the eventual loss of the trees due to existing pest damage and	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	Flatheaded Borers (including bronze birch and alder borers)	
tree stress.		use less than 4 holes per tree.	Japanese Beetles (adults)
		SOIL DRENCH: 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.	Lacebugs Leaf Beetles (including elm and viburnum leaf beetles)
		SOIL INJECTION – No Soil Injection Application allowed in Nassau or Suffolk counties of New York.	Leafhoppers (including glassy-winged sharpshooter)
Shrubs	0.1 – 0.2 fl. oz. (3 to 6 mL) per foot of shrub	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
	height	SOIL DRENCH: 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
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.	Whiteflies
† Suppression only of t	hese 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.

Pest	Fluid ounces per 100 gal.	Fluid ounces per Acre <sup>‡</sup>	Specific Instructions
Aphids (except Wooly apple aphid) Leafhoppers (including glassy-winged sharpshooter) Leafminer Mealybugs <sup>†</sup> San Jose Scale <sup>†</sup>	1.5 (45 mL)	6.0	Apply as a foliar spray as needed after petal-fall is complete.  Rosy Apple Aphid: Apply prior to leaf rolling caused by the pest.  Leafhopper: For late season (preharvest) control apply while most leafhoppers are in the nymphal stage.  Leafminer: 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.  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 Turf Insecticide will not control late stage larvae.  Mealybug: For best results be sure to have good spray coverage of the trunk and scaffolding limbs or other nesting sites.  San Jose Scale: Time applications to the crawler stage and treat each generation.

Not permitted for control on pears in California.

### PECANS IN AND AROUND RESIDENTIAL AREAS

#### NOT PERMITTED IN CALIFORNIA unless otherwise directed by supplemental labeling

- Reapplication Interval: At least 10 days
- Maximum Applications per Year: 3
- Maximum Imidacloprid 2F Turf 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	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.  For best results, thorough and uniform coverage is necessary. Coverage may be improved through the use of an organosilicone-based spray adjuvant.
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The amount of ET-002 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.

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

- Reapplication Interval: At least 14 days
- Maximum Imidacloprid 2F Turf 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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