

# **GRASSY AREAS IN FIELD & FOREST NURSERIES - FOR CONTROL OF MOLE CRICKETS AND SUPPRESSION OF CHINCH BUGS AND CUTWORMS**

General Information

## **RESISTANCE MANAGEMENT**

Certain insects may develop resistance to insecticides after repeated use. Use different resistance management practices such as rotating classes of insecticides to help delay or minimize insect resistance.

This product contains the active ingredient imidacloprid, which is a Group 4A insecticide. Repeated use of Group 4A insecticides may lead to insect pests that become resistant to imidacloprid or other neonicotinoids (Group 4A) insecticides.

To reduce the chances of development of resistance to Group 4A insecticides, do not make more than three (3) consecutive foliar applications of this product and/or other Group 4A insecticides with similar modes of action. In addition, Nufarm strongly recommends the use of other insecticides with a different mode of action prior to or after application of this product. This strategy of insecticide rotation in concert with other IPM practices is considered an effective way to delay or minimize an insect's ability to develop resistance to this class of chemistry.

Some Group 4A neonicotinoid products used as foliar treatments include the active ingredients thiamethoxam (found in Actara and Centric), acetamiprid (found in Assail and Intruder), thiacloprid (found in Calypso), and imidacloprid (found in Leverage, Provado, and Trimax). Some Group 4A neonicotinoid products used as soil treatment include thiamethoxam (found in Platinum) and imidacloprid (found in Admire).

Additional information on insect resistance management may be obtained from your local Extension specialist, certified crop advisor and/or product manufacturer, or from the Insecticide Resistance Action Committee (IRAC) on the Web at <http://iraonline.org/>.

## USE INFORMATION

Thorough uniform coverage is necessary to achieve optimal control. A spray adjuvant may be used to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control; retreat if needed and as directed on this label. Tank mix this product with other insecticides as specified for knockdown of pests or for improved control of other pests.

## USE RESTRICTIONS (All Uses)

- DO NOT make a foliar application of any chloronicotinyl insecticide for resistance management purposes following a soil application of this product on the same crop.
- DO NOT use product packets in a tank mix with products that contain boron or release free chlorine; the PVA packet reacts with boron or free chlorine to produce a plastic that is not soluble in water. NOTE: Normal chlorinated water is acceptable for mixing.
- DO NOT use this product on commercial sod farms.
- DO NOT allow livestock to graze in treated areas or use clippings from treated areas for feed or forage unless specified otherwise on this label.
- DO NOT apply this product to soils that are waterlogged or saturated.
- DO NOT allow runoff or puddling of irrigation water following application.
- DO NOT allow leachate to run off for the first 10 days after application or reduced efficacy may result.
- DO NOT exceed the total 5.375 packets (8.6 oz.) of this product (0.4 lb. AI)/Acre per year specified for the uses indicated on this label.

## ROTATION CROPS RESTRICTIONS

Crops which are listed on imidacloprid labels or crops that have existing tolerances for imidacloprid may be planted in treated areas as soon as practical after the last imidacloprid application. Crops that are not found on an imidacloprid label, or crop that do not have existing tolerances for imidacloprid, may not be planted in treated areas for 12 months after the last application.

Refer to the table in the label for plantback intervals for different crops. Note that if cover crops are planted any time after an application of this product, those crops may not be grazed or harvested for food or feed.

#### APPLICATION THROUGH IRRIGATION SYSTEMS (CHEMIGATION)

Apply this product at rates specified on this label either alone or in tank mixture with other pesticides and chemicals registered for application through irrigation systems. The normal dilution ratio is 1:10 to 1:200, depending on the system. Always meter the product into the irrigation water during the first part of the irrigation cycle. Mix the product separately prior to injection. Agitate as necessary if the mixture is allowed to stand more than 24 hours.

- DO NOT connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- Apply this product only through micro-irrigation (individual spaghetti tube), drip irrigation, overhead irrigation, and ebb and flood or hand-held or motorized calibrated irrigation equipment. DO NOT apply this product through any other type of irrigation system. Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.
- Be sure to remove scale, pesticide residue and other foreign matter from the tank and entire irrigation system prior to application.
- A person knowledgeable of the chemigation system and responsible for its operation, or a person who is under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- If you have any questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.

#### SAFETY DEVICES FOR IRRIGATION SYSTEMS CONNECTED TO PUBLIC WATER SUPPLIES:

If the source of water for your irrigation system is a public water supply, follow the instructions below.

1. 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.

2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, 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 the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. 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.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. 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.
7. DO NOT apply when wind speed favors drift beyond the area intended for treatment.

#### SAFETY DEVICES FOR IRRIGATION SYSTEMS NOT CONNECTED TO A PUBLIC WATER SUPPLY:

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. 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.

4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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 the pesticide distribution is adversely affected.
6. 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.
7. DO NOT apply when wind speed favors drift beyond the area intended for treatment.

### Limitations, Restrictions, and Exceptions

#### APPLICATION TO GRASSY AREAS IN NURSERIES, NURSERY, AND GREENHOUSE GROWN ORNAMENTALS

Use this product on grassy areas in nurseries, around and on nursery grown ornamentals, and in planting rows in nurseries to control listed pests. Make application prior to anticipated pest infestation to maximize control. Rainfall, irrigation and mechanical incorporation after application will aid in maximizing control.

The active ingredient in this product has sufficient residual activity so that applications can be made preceding the egg-laying activity of the target pests. High levels of control can be achieved when applications are made preceding or during the egg-laying period. 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.

#### Application Instructions

Apply this product in sufficient water to provide adequate distribution in the treated area. The use of accurately calibrated equipment normally used for soil application of insecticides is required. Use equipment that 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.

## Application Instructions

For control of mole crickets, make application prior to or during the peak egg hatch period. When adults or large nymphs are present and actively tunneling, this product should be accompanied by a curative insecticide.

For suppression of chinchbugs, make application prior to the hatching of the first instar nymphs.

Consult your local State Agricultural Experiment Station, or State Extension Turf Specialists for more specific information regarding timing of application.

Mowing of the vegetation in the area to be treated to a height of 3 inches or less prior to application will improve the consistency of control.

NOTE: Irrigation or rainfall is needed within 24 hours after application to move the active ingredient through the thatch.

## Restrictions

- DO NOT apply more than 5.375 packets (8.6 oz.) (0.4 lb. of active ingredient) per acre per year.
- DO NOT mow grassy area until after irrigation or rainfall has occurred so that uniformity of application will not be affected.
- DO NOT allow runoff or puddling of irrigation water following application.
- DO NOT apply this product to water-logged or saturated areas. Application of this product to water-logged or saturated areas will not allow penetration into the root zone of the plant.
- DO NOT graze treated areas or use clippings from treated areas for feed or forage.
- DO NOT allow this product to contact plants in bloom if bees are foraging the treatment area.

ORNAMENTAL SHRUBS (in and around the perimeter of industrial and commercial buildings and residential areas, and state, national, and private wooded and forested areas for the insect pests listed.

## Application Site

Soil Injection: Apply to individual plants using dosage indicated.

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. Keep the treated area moist for 7 to 10 days. DO NOT use less than 4 holes per shrub.

**NEW YORK SPECIFIC RESTRICTION:** No Soil Injection Applications Allowed in Nassau or Suffolk Counties of New York.

Soil Drench: Uniformly apply the dosage in no less than 10 gallons of water per 1,000 square feet as a drench around the base of the shrub, directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone.

#### Application Instructions

- Pine sawfly larvae feed on mature foliage beginning in early spring. Make treatments in the fall before pine sawfly emergence in spring to allow adequate time for imidacloprid translocation into mature foliage.

#### Restrictions

- DO NOT apply more than 5.375 packets (8.6 oz.) (0.4 lb. AI) per acre per year.  
- DO NOT harvest or consume fruits or nuts from trees that have been treated within 1 year of application.

#### Method

[Spray](#)

#### Restricted Entry Interval

12 hours

Exception: If the product is applied by drenching, 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.

#### Timings

[Mole crickets: Prior to or during the peak egg hatch period.](#)

[Chinchbugs: Prior to hatching of the first instar nymphs.](#)