

86203-14

12/20/2013

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



OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

DEC 20 2013

Mitsui Chemicals Agro, Inc.  
1-5-2 Higashi-Shimbashi  
Minato-ku  
Tokyo 105-7117  
JAPAN

U. S. Agent:  
Landis International  
P. O. Box 5126  
Valdosta, GA 31603-5126  
Attention: Ms. Lindsey Sorensen

Subject: Amended label adding pollinator protection language  
Product Name: Dinotefuran 10SL  
EPA Reg. No. 86203-14  
EPA Decision No. 484202  
Submissions dated 9/30/2013, 12/3/2013, and 12/11/2013

Dear Ms. Sorensen:

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).

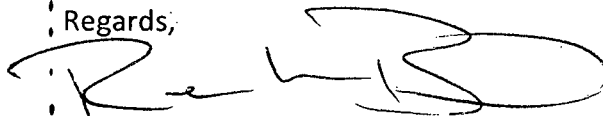
Under 40 CFR 152.130(d), EPA may establish dates by which all product distributed or sold by the registrant must bear revised labeling. The following paragraphs set forth the schedule for ensuring that that your product bears revised labeling within a reasonable time period.

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

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If these conditions are not complied with, EPA will take appropriate action against this registration. If you have any questions please contact Rita Kumar at 703-308-8291 or [kumar.rita@epa.gov](mailto:kumar.rita@epa.gov).

Regards;



- Reuben Baris
- Acting Product Manager 7
- Insecticide-Rodenticide Branch
- Registration Division (7505P)

Enclosure

GROUP	4A	INSECTICIDE
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### [MASTER LABEL]

This master label contains two (2) sub-labels:

**Sub-label 1:** DINOTEFURAN 10SL contains agricultural uses for control of listed sucking and chewing insects infesting cucurbits, fruiting vegetables, grapes, head and stem brassica, leafy vegetables, and potatoes.

**Sub-label 2:** DINOTEFURAN 10SL contains commercial uses for control of listed sucking and chewing insects on landscape ornamental plants and turfgrass.

# DINOTEFURAN 10SL

For control of listed sucking and chewing insects infesting turfgrass, certain ornamentals, leafy vegetables, fruiting vegetables, cucurbits, potatoes, grapes and head and stem brassica.  
For Outdoor Use Only

**Active Ingredient:**

Dinotefuran*, N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]guanidine.....	10%
Other Ingredients .....	90%
Total:	100%

\*0.89 pounds dinotefuran per gallon

<p><b>KEEP OUT OF REACH OF CHILDREN</b></p> <p><b>CAUTION</b></p> <p><i>See side panels for additional precautionary statements</i></p>
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EPA Reg. No. 86203-14

EPA Establishment No.  54675-MEX-001  87590-JPN-001

**Net Contents:**

264.20 gallons (1000 liters) or 52 gallons (200 liters) or 2 gallons (10 liters) or 1.05 pints (500 milliliters)

Lot or Batch No.: \_\_\_\_\_

**Manufactured By:**

MITSUI CHEMICALS AGRO, INC.	
Shiodome City Center 1-5-2 Higashi-Shimbashi Minato-ku, Tokyo 105-7117 JAPAN	P. O. Box 5126 Valdosta, GA 31603-5126 USA

**ACCEPTED**  
**DEC 20 2013**  
Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for the  
pesticide registered under:

EPA Reg. No: 86203-14

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[Sub-Label 1]

# DINOTEFURAN 10SL

For control of listed sucking and chewing insects infesting cucurbits, fruiting vegetables, grapes, head and stem brassica, leafy vegetables, and potatoes

For Outdoor Use Only

**Active Ingredient:**

Dinotefuran*, N-methyl-N'-nitro-N'-[(tetrahydro-3-furanyl)methyl]guanidine.....	10%
Other Ingredients .....	90%
Total:	100%

\*0.89 pounds dinotefuran per gallon

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**  
*See side panels for additional precautionary statements*

FIRST AID	
<b>If Swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor 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>
<b>If In Eyes</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>In On Skin Or Clothing</b>	<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 further treatment advice.</li> </ul>
<b>If Inhaled</b>	<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 mouth-to-mouth, if possible.</li> <li>• Call poison control center or doctor for treatment advice.</li> </ul>
HOT LINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment.</p> <p>For emergency information on (product, use, etc.), call the National Pesticides Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific time (PT), seven days a week. During other times, call the poison control center 1-800-222-1222.</p>	
<i>See side/back panels for additional precautionary statements</i>	

EPA Reg. No. 86203-14

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PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION**

Harmful if swallowed or absorbed through skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Remove and wash contaminated clothing before use.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

**USER SAFETY REQUIREMENTS**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

**Users Should:**

- Wash hands with soap and water 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 pesticide is 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 apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not dispose equipment washwaters or rinsate into a natural drain or water body.

This product is toxic to honey bees. The persistence of residues and potential residual toxicity of Dinotefuran in nectar and pollen suggests the possibility of chronic toxic risk to honey bee larvae and the eventual instability of the hive.

- This product is toxic to bees exposed to residue for more than 38 hours following treatment.
- Do not apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period, unless the application is made in response to a public health emergency declared by appropriate state or federal authorities.

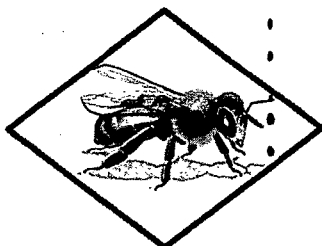
Dinotefuran and its degradate, MNG, have the properties and characteristics associated with chemicals detected in groundwater. The high water solubility of dinotefuran, and its degradate MNG, coupled with its very high mobility, and resistance to biodegradation indicates that this compound has a strong potential to leach to the subsurface under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Periodic monitoring of shallow groundwater in the use area is recommended.

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**SPRAY DRIFT ADVISORY**

Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crop thereof rendered for sale, use or consumption.


## 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.**

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**READ ENTIRE LABEL, USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

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



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

**If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying. Bees must remain removed, covered or otherwise protected for 38 hours following application.**

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



- **Do not apply this product while bees are foraging.**
- **This product is toxic to bees exposed to residue for more than 38 hours following treatment.**
- **Do not apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period, unless the application is made in response to a public health emergency declared by appropriate state or federal authorities.**

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 State or Tribal agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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 and notification to workers. 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.**

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
- Shoes plus socks
- Chemical resistant gloves (made of any waterproof material)

**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 (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**Do not allow others to enter treated areas until sprays have dried.**

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## APPLICATION INFORMATION

~~Failure to follow directions and precautions on this label may result in crop injury, poor insect control, and/or illegal residues.~~

### For Outdoor Use Only

For best performance, always follow these directions:

- Apply DINOTEFURAN 10SL when insect pest populations begin to build, but before populations reach economically damaging levels. Economic thresholds for pests controlled by DINOTEFURAN 10SL may be available from your local agricultural authorities.
- DINOTEFURAN 10SL is a selective insecticide which should have minimal impact on beneficial arthropods and its use is compatible with integrated pest management (IPM) programs. However, DINOTEFURAN 10SL is toxic to bees exposed to direct treatment or to residue on blooming crops and weeds.
- DINOTEFURAN 10SL is taken up into foliage after application. Thorough spray coverage is essential for optimal performance. Apply DINOTEFURAN 10SL in sufficient water to ensure good coverage.
- DINOTEFURAN 10SL may aid in the suppression of some pests. Suppression can mean either inconsistent control (good to poor), or consistent control at a level below that generally considered acceptable for commercial control.
- If the maximum season limit of DINOTEFURAN 10SL as defined in the crop use directions has been applied and pest populations require additional treatments, use another registered pesticide that is not in the neonicotinoid class or nitroguanidine subclass of chemistry.

### Rotational Crops:

For all crops other than cucurbits, fruiting vegetables, grapes, head and stem brassica, leafy vegetables and potatoes, a 120-day plant-back interval must be observed.

### RESTRICTIONS:

- Do not graze treated areas or use clippings from treated areas for feed or forage.
- Do not apply under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.
- Prevent runoff or puddling of irrigation water following application.
- Do not apply to areas that are water logged, saturated, or frozen that will not allow penetration into the root zone of the plant.
- **Do not use on house plants grown inside residences.**

### MIXING INSTRUCTIONS:

**DINOTEFURAN 10SL Alone:** Add ½ of the required amount of water to the mix tank. With the agitator running, add the desired amount of DINOTEFURAN 10SL to the tank. Continue agitation while adding the remainder of the water. Begin solution application after DINOTEFURAN 10SL has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

**DINOTEFURAN 10SL + Tank Mixtures:** Add ½ of the required amount of water to the mix tank. Start the agitator running before adding any tank mix partners. In general, tank mix partners should be added in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables), liquid flowables, liquids, emulsifiable concentrates, and surfactants/adjuvants. Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all the mixture has been applied.



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**NOTE:** When using DINOTEFURAN 10SL in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank mix partner, including DINOTEFURAN 10SL. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other-tank mix partner to the tank.

If using DINOTEFURAN 10SL in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations that appear on the tank mix product label. No label dosage rate should be exceeded, and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product that prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are labeled.

**Compatibility: NOTE - The crop safety of all potential tank mixes on all crops has not been tested. Before applying any tank mixture not specifically recommended on this label, the safety to the target crop should be confirmed.**

DINOTEFURAN 10SL is compatible with most commonly used pesticides. However, since it is not possible to test all possible mixtures, the user should pre-test to assure the physical compatibility and lack of phytotoxic effect of any proposed mixtures with DINOTEFURAN 10SL. To determine the physical compatibility of DINOTEFURAN 10SL with other products, use a jar test, as described below:

Using a quart jar, add the proportionate amounts of the products to 1 quart of water. Add wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for additional required ingredients to the spray tank.

#### RESISTANCE MANAGEMENT RECOMMENDATIONS

DINOTEFURAN 10SL contains a Group 4A insecticide. Insect biotypes with acquired resistance to Group 4A may eventually dominate the insect population if Group 4A insecticides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by DINOTEFURAN 10SL or other Group 4A insecticides.

To delay insecticide resistance, consider:

- NOT using a foliar application of dinotefuran or any insecticide in the neonicotinoid class following an in-furrow or soil application of DINOTEFURAN 10SL.
- To optimize resistance management practices, no more than 3 applications of DINOTEFURAN 10SL per growing season are allowed.
- Avoiding the consecutive use of DINOTEFURAN 10SL or other Group 4A insecticides that have a similar target site of action, on the same insect species.
- Using tank-mixtures or premixes with insecticides from a different target site of action Group as long as the involved products are all registered for the same use and have different sites of action.
- Basing insecticide use on a comprehensive IPM program.
- Monitoring treated insect populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors, and/or manufacturers for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, you may contact Landis International, Inc., a representative of Mitsui Chemicals Agro, Inc., at toll free number: 1-800-526-3471.

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## APPLICATION PROCEDURES AND SPRAY EQUIPMENT

**Ground Application:** Select spray nozzles which will provide accurate and uniform spray deposition. Use spray nozzles which provide medium-sized droplets and reduce drift. To help insure accuracy, calibrate sprayer before each use. For information on spray equipment and calibration, consult nozzle manufacturers and/or State Extension Service specialists.

Apply DINOTEFURAN 10SL using sufficient water volume to provide thorough and uniform coverage. In situations where a dense canopy exists and/or pest pressure is high, use greater water volumes. The use of a spray adjuvant may improve spray coverage. Avoid making applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

**Aerial Application:** Apply DINOTEFURAN 10SL in water, using the minimum spray volume indicated in the "Remarks" section of each crop, but not less than 3 gals./A. Increase spray volume where practical to improve coverage. Avoid making applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

## APPLICATION THROUGH IRRIGATION SYSTEMS (CHEMIGATION):

DINOTEFURAN 10SL, alone or in combination with other products which are registered for application through sprinkler irrigation, may be applied through irrigation systems where so noted in the soil application of each crop. DINOTEFURAN 10SL may be applied through microirrigation (individual spaghetti tube), overhead irrigation, motorized calibrated irrigation equipment, drip irrigation or trickle irrigation where so noted in the soil application of each crop, but must NOT be applied through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts. 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. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### Using Water from Public Water Systems:

**DO NOT APPLY DINOTEFURAN 10 SL THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM.**

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 at least 25 individuals daily at least 60 days per year. DINOTEFURAN 10 SL may be applied through irrigation systems which may be supplied by a public water system only if the water from the public water system is discharged into a reservoir tank prior to pesticide introduction. There shall be a complete break (air gap) between the outer end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Any irrigation system using water supplied from a public water system must also meet the following requirements:

### Operating Instructions for All Recommended Types of Irrigation Systems:

- The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.

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- 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 back flow.
- The pesticide injection pipeline must also contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional inter-locking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended.

**Calibration and Application Instructions:**

Apply DINOTEFURAN 10SL under the schedule specified in the specific crop use recommendations, not according to the irrigation schedule unless the events coincide. In general, set the equipment to apply the minimum amount of water per acre. Run the system at 86 - 90% of the manufacturer's maximum rated travel speed.

The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

**Drip or Trickle Irrigation Equipment:**

1. Determine the acreage covered by the irrigation equipment.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20-40 minute time interval.
3. Determine the amount of DINOTEFURAN 10SL required to treat the area covered by the irrigation system.
4. Add the required amount of DINOTEFURAN 10SL, and any other tank mix partners, into the same quantity of water used to calibrate the injection period. (See "Mixing Instructions" section of this label.)
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of DINOTEFURAN 10SL per acre for either a 20-40 minute period at the end of a regular irrigation set, or as a 20-40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the insecticide by the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the DINOTEFURAN 10SL solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

**Center Pivot Irrigation Equipment:**

NOTES: 1) Use only drive systems that provide uniform water distribution. 2) Do not use end guns when chemigating DINOTEFURAN 10SL through center pivot systems because of non-uniform application. 3) Plug the first nozzle closest to the well head to protect the water source.

1. Determine the size of the area to be treated.
2. Determine the time required to apply 0.1 - 0.25 inches of water over the area to be treated when the

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system and injection equipment are operated at normal pressures as recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated maximum travel speed.

3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of DINOTEFURAN 10SL, and any tank mix partners, required to treat the area covered by the irrigation system.
5. Add the required amount of DINOTEFURAN 10SL, and any tank mix partners, and sufficient water to meet the injection time requirements to the solution tanks. (See "Mixing Instructions" section of this label.)
6. Make sure the system is fully charged with water before starting injection of the DINOTEFURAN 10SL solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
7. Maintain constant agitation in the solution tank during the injection period.
8. Inject the specified amount of DINOTEFURAN 10SL per acre continuously for one complete revolution of the system.
9. Stop the injection equipment after treatment is complete. Continue to operate the system until the DINOTEFURAN 10SL solution has cleared all of the sprinkler heads.
10. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water.

**Solid Set, Hand Move, and Moving Wheel Irrigation Equipment:**

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20-40 minute time interval.
3. Determine the amount of DINOTEFURAN 10SL required to treat the area covered by the irrigation system.
4. Add the required amount of DINOTEFURAN 10SL, and any other tank mix partners, into the same quantity of water used to calibrate the injection period. (See "Mixing Instructions" section of this label.)
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of DINOTEFURAN 10SL per acre for either a 20-40 minute period at the end of a regular irrigation set, or as a 20-40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the insecticide by the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the DINOTEFURAN 10SL solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

**RECOMMENDATIONS TO AVOID SPRAY DRIFT**

**AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.** 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 decisions. Where states have more stringent regulations, they should be observed. Follow these recommendations to avoid spray drift:

1. Make applications when wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 10 mph. Avoid applications when wind gusts approach 10 mph.
2. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.
3. Do not cultivate or plant crops within 25 feet of the aquatic area as to allow growth of a vegetative filter strip.
4. Do not make applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with increased height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

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5. Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
6. Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage. Applications more than 10 ft. above the crop canopy should be avoided.
7. For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. Use the minimum practical boom length. Do not exceed 75% of wing span or rotor diameter.

**Air Assisted (Air Blast) Tree and Vine Sprayers (Grapes and Potato Only):** Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream.

In addition to the general drift management principles already described, the following specific practices will further reduce the potential for drift:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage. Use a minimum of 50 gallons finished spray per acre.
- Do not allow spray to go beyond the edge of the cultivated area. Spray the outside row only from outside the planting.

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## CUCURBITS

Crop	Pest	Product Rate / Acre Per Application	SPECIAL INSTRUCTIONS
Balsam pear (bitter melon) Calabaza Chayote (fruit) Chinese okra Chinese waxgourd Citron melon Cucumber Gherkin Gourds Edible melons including hybrids Cantaloupe Casaba Chinese preserving melon Crenshaw melons Honey balls Mango melon Muskmelon Persian melon Winter melon Pumpkin Squash including: Summer Winter acorn Spaghetti Watermelon including hybrids	Melon aphid Green peach aphid Thrips Leafhoppers Leafminers Whiteflies	FOLIAR: 6.5 - 26.0 fl. oz./A (0.045 - 0.179 lb a.i./A)  OR  SOIL:  32.5 - 47.5 fl. oz./A (0.226 - 0.33 lbs. a.i./A)	Higher water volumes provide improved insect control.  Begin applications when first pest activity is noticed or when insects reach threshold levels per University/Extension recommendations and repeat as needed to maintain control, but not more often than every 7 days. For best results, time application before a damaging population becomes established.  Under severe pest pressure, use the higher specified rates.

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### CUCURBITS (CONTINUED)

The rate applied affects the length of control. Use the high rate where infestations occur later in crop development, or where pest pressure is continuous.

DINOTEFURAN 10SL may be mixed and/or alternated with commonly used insecticides to comply with local IPM and Resistance Management programs.

**Foliar Application:** Apply with air or ground equipment in adequate water for uniform coverage (3 to 10 gallons/acre by air or 20 to 40 gallons/acre by ground).



Follow application instructions as indicated in Bee Hazard Direction for Use.

**Soil Application:**

See conversion chart for linear application to plant application rates.

Apply specified dosage in sufficient carrier volume to insure uniform application and incorporate into the soil using one of the following methods:

- (1) In a narrow band centered on the plant row in the bedding operation just prior to planting. For best results band width should be 2" or less and placed 1 to 2" below the seed depth.
- (2) In-furrow spray at or below seed level or a narrow surface band above the seedline during planting. For surface-banded applications incorporate to a depth of 1-1/2" with sufficient irrigation within 24 hours to insure satisfactory insect control.
- (3) As a post-seeding drench, transplant drench or hill drench. Applications should be made with sufficient water to insure incorporation into the root zone.
- (4) As a sidedress after plants are established. Applications should be placed within 2 to 4" to the side of each row and incorporated 1 or more inches deep. Applications should be made to each row if there are two rows per bed.
- (5) In drip or trickle irrigation water.

**Restrictions:**

Do not apply to vegetables grown for seed.

For foliar applications, do not apply within 1 day of harvest.

For soil applications, do not apply within 21 days of harvest.

Do not apply more than a total of 39.0 fl. oz. of DINOTEFURAN 10SL (0.268 lb. a.i.) per acre per season as foliar sprays.

Do not apply more than a total of 78.0 fl. oz. of DINOTEFURAN 10SL (0.536 lb. a.i.) per acre per season as soil applications.

**Do not combine foliar applications with soil applications, or vice versa. Only use one application method.**

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## FRUITING VEGETABLES

CROP	PEST	PRODUCT RATE/ ACRE PER APPLICATION	SPECIAL INSTRUCTIONS
Eggplant Ground Cherry Pepinos Pepper including: Bell peppers Chili peppers Cooking peppers Pimentos Sweet peppers Tomatillo Tomato	Green peach aphid Potato aphid Colorado potato beetle Flea beetles Leafhoppers Leafminers Thrips Whiteflies	FOLIAR: 6.5 - 26.0 fl. oz./A (0.045 - 0.179 lb. a.i./A)  SOIL: 32.5 - 47.5 fl. oz./A (0.226 - 0.33 lbs. a.i./A)	<b>Higher water volumes provide improved insect control.</b>  Begin applications when first pest activity is noticed or when insects reach threshold levels per University/Extension recommendations and repeat as needed to maintain control, but not more often than every 7 days. For best results, time application before a damaging population becomes established.  Under severe pest pressure, use the higher specified rates.

The rate applied affects the length of control. Use the high rate where infestations occur later in crop development, or where pest pressure is continuous.

DINOTEFURAN 10SL may be mixed and/or alternated with commonly used insecticides to comply with local IPM and Resistance Management programs.

**Foliar Application:** Apply with air or ground equipment in adequate water for uniform coverage (3 to 10 gallons/acre by air or 20 to 40 gallons/acre by ground).



**Follow application instructions as indicated in Bee Hazard Direction for Use.**

**Soil Application:** See conversion chart for linear application to plant application rates.

Apply specified dosage in sufficient carrier volume to insure uniform application and incorporate into the soil using one of the following methods:

- (1) In a narrow band centered on the plant row in the bedding operation just prior to planting. For best results band width should be 2" or less and placed 1 to 2" below the seed depth.
- (2) In-furrow spray at or below seed level or a narrow surface band above the seedline during planting. For surface-banded applications incorporate to a depth of 1-1/2" with sufficient irrigation within 24 hours to insure satisfactory insect control.
- (3) As a post-seeding drench, transplant drench or hill drench. Applications should be made with sufficient water to insure incorporation into the root zone.
- (4) As a sidedress after plants are established. Applications should be placed within 2 to 4" to the side of each row and incorporated 1 or more inches deep. Applications should be made to each row if there are two rows per bed.
- (5) In drip or trickle irrigation water.

**RESTRICTIONS:**

For foliar applications, do not apply within 1 day of harvest.

For soil applications, do not apply within 21 days of harvest.

Do not apply to vegetables grown for seed.


Do not apply more than a total of 39.0 fl. oz. of DINOTEFURAN 10SL (0.268 lb. a.i.) per acre per season as foliar sprays.

Do not apply more than a total of 78.0 fl. oz. of DINOTEFURAN 10SL (0.536 lb. a.i.) per acre per season as soil applications.

**Do not combine foliar applications with soil applications, or vice versa. Only use one application method.**



## GRAPES

CROP	PEST	PRODUCT RATE/ ACRE PER APPLICATION	SPECIAL INSTRUCTIONS
Grapes	Grape mealybug Leafhoppers Thrips Glassy-wing sharpshooter	FOLIAR: 6.5 - 19 fl. oz./A (0.045 - 0.132 lb. a.i./A) • • • SOIL: 32.5 - 47.5 fl. oz./A (0.226 - 0.33 lbs. a.i./A) •	<b>Higher water volumes provide improved insect control.</b>  Begin foliar applications when first pest activity is noticed or when insects reach threshold levels per University/Extension recommendations and repeat as needed to maintain control, but not more often than every 14 days. For best results, time application before a damaging population becomes established.  Under severe pest pressure, use the higher specified rates.
<p>The rate applied affects the length of control. Use the high rate where infestations occur later in crop development, or where pest pressure is continuous.</p>			
<p>DINOTEFURAN 10SL may be mixed and/or alternated with commonly used insecticides to comply with local IPM and Resistance Management programs.</p>			
<p><b>Foliar Application:</b> Apply with air or ground equipment in adequate water for uniform coverage (3 to 10 gallons/acre by air or 10 to 50 gallons/acre by ground). Use a minimum of 50 gallons finished spray per acre for air blast application.</p>			
<p> <b>Follow application instructions as indicated in Bee Hazard Direction for Use.</b></p>			
<p><b>Soil Application:</b> Apply specified dosage in sufficient carrier volume to insure uniform application and incorporate into the soil using one of the following methods:</p> <ul style="list-style-type: none"> <li>• In drip or trickle irrigation water</li> </ul>			
<p>Make only one soil application.</p>			
<p><b>Restrictions:</b> For foliar applications, do not apply within 1 day of harvest. For soil application, do not apply within 28 days of harvest. Do not apply more than a total of 38.6 fl. oz. of DINOTEFURAN 10SL (0.264 lb. a.i.) per acre per season as foliar sprays. Do not apply more than a total of 47.5 fl. oz. of DINOTEFURAN 10SL (0.33 lbs. a.i.) per acre per season as soil applications.</p>			
<p><b>NOTE:</b> Regardless of application method do not apply more than a total of 77.3 fl. oz. of DINOTEFURAN 10SL (0.529 lb. a.i.) per acre per season.</p>			

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**HEAD & STEM BRASSICA**

CROP	PEST	PRODUCT RATE/ ACRE PER APPLICATION	SPECIAL INSTRUCTIONS
Broccoli, Brussels sprouts, Cabbage, Cauliflower, Cavalo broccolo, Chinese broccoli, Chinese cabbage, Chinese mustard cabbage, Kohlrabi	Green peach aphids, Cabbage aphids, Leafminers, Whiteflies	FOLIAR: 6.5 - 26.0 fl. oz./A (0.045-0.179 lb. a.i./A)  OR  SOIL: 32.5 - 47.5 fl. oz./A (0.226 - 0.33 lb. a.i./A)	<b>Higher water volumes provide improved insect control.</b>  Begin applications when first pest activity is noticed or when insects reach threshold levels per University/Extension recommendations and repeat as needed to maintain control, but not more often than every 7 days. For best results, time application before a damaging population becomes established.  Under severe pest pressure, use the higher specified rates.

The rate applied affects the length of control. Use the high rate where infestations occur later in crop development, or where pest pressure is continuous.

DINOTEFURAN 10SL may be mixed and/or alternated with commonly used insecticides to comply with local IPM and Resistance Management programs.

**Foliar Application:** Apply with air or ground equipment in adequate water for uniform coverage (3 to 10 gallons/acre by air or 20 to 40 gallons/acre by ground).



**Follow application instructions as indicated in Bee Hazard Direction for Use.**

**Soil Application:** See conversion chart for linear application to plant application rates.

Apply specified dosage in sufficient carrier volume to insure uniform application and incorporate into the soil using one of the following methods:

- (1) In a narrow band centered on the plant row in the bedding operation just prior to planting. For best results band width should be 2" or less and placed 1 to 2" below the seed depth.
- (2) In-furrow spray at or below seed level or a narrow surface band above the seedline during planting. For surface-banded applications incorporate to a depth of 1-1/2" with sufficient irrigation within 24 hours to insure satisfactory insect control.
- (3) As a post-seeding drench, transplant drench or hill drench. Applications should be made with sufficient water to insure incorporation into the root zone.
- (4) As a sidedress after plants are established. Applications should be placed within 2 to 4" to the side of each row and incorporated 1 or more inches deep. Applications should be made to each row if there are two rows per bed.
- (5) In drip or trickle irrigation water.

**RESTRICTIONS:**

For foliar applications, do not apply within 1 day of harvest.

For soil applications, do not apply within 21 days of harvest.

Do not apply to vegetables grown for seed.

Do not apply more than a total of 39.0 fl. oz. of DINOTEFURAN 10SL (0.268 lb. a.i.) per acre per season as foliar sprays.

Do not apply more than a total of 78.0 fl. oz. of DINOTEFURAN 10SL (0.536 lb. a.i.) per acre per season as soil applications.

**Do not combine foliar applications with soil applications, or vice versa. Only use one application method.**

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**LEAFY VEGETABLES**

CROP	PEST	PRODUCT RATE/ ACRE PER APPLICATION	SPECIAL INSTRUCTIONS
Leafy Vegetables includes: Amaranth, Arugula Cardoon, Celery, Chinese Celery, Celtnce, Chervil, Edible-leaved & Garland Chrysanthemum, Corn Salad, Garden & Upland Cress, Dandelion, Dock, Endive, Florence Fennel, Head & Leaf Lettuce, Orach, Parsley, Garden & Winter Purslane, Radicchio, Rhubarb, Spinach, New Zealand & Vine Spinach, Swiss Chard	Potato aphid Green peach aphid Sweetpotato whitefly Silverleaf whitefly Banded wing whitefly Leafhopper Leafminer	FOLIAR: 6.5 - 19.5 fl. Oz./A (0.045 - 0.134 lb. a.i./A)  OR  SOIL: 32.5 - 47.5 fl. oz./A (0.226 - 0.33 lbs. a.i./A)	<p><b>Higher water volumes provide improved insect control.</b></p> <p>Begin applications when first pest activity is noticed or when insects reach threshold levels per University/Extension recommendations and repeat as needed to maintain control, but not more often than every 7 days. For best results, time application before a damaging population becomes established.</p> <p>Under severe pest pressure, use the higher specified rates.</p>

The rate applied affects the length of control. Use the high rate where infestations occur later in crop development, or where pest pressure is continuous.

DINOTEFURAN 10SL may be mixed and/or alternated with commonly used insecticides to comply with local IPM and Resistance Management programs.

**Foliar Application:** Apply with air or ground equipment in adequate water for uniform coverage (3 to 10 gallons/acre by air or 20 to 40 gallons/acre by ground).



**Follow application instructions as indicated in Bee Hazard Direction for Use.**

**Soil Application:** See conversion chart for linear application to plant application rates.

Apply specified dosage in sufficient carrier volume to insure uniform application and incorporate into the soil using one of the following methods:

- (1) In a narrow band centered on the plant row in the bedding operation just prior to planting. For best results band width should be 2" or less and placed 1 to 2" below the seed depth.
- (2) In-furrow spray at or below seed level or a narrow surface band above the seedline during planting. For surface-banded applications incorporate to a depth of 1-1/2" with sufficient irrigation within 24 hours to insure satisfactory insect control.
- (3) As a post-seeding drench, transplant drench or hill drench. Applications should be made with sufficient water to insure incorporation into the root zone.
- (4) As a sidedress after plants are established. Applications should be placed within 2 to 4" to the side of each row and incorporated 1 or more inches deep. Applications should be made to each row if there are two rows per bed.
- (5) In drip or trickle irrigation water.

**RESTRICTIONS:**

Do not apply to vegetables grown for seed.

For foliar applications, do not apply within 7 days of harvest.

For soil applications, do not apply within 21 days of harvest.

Do not apply more than a total of 39.0 fl. oz. of DINOTEFURAN 10SL (0.268 lb. a.i.) per acre per season as foliar sprays.

Do not apply more than a total of 78.0 fl. oz. of DINOTEFURAN 10SL (0.536 lb. a.i.) per acre per season as soil applications.

**Do not combine foliar applications with soil applications, or vice versa. Only use one application method.**

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**POTATO**

CROP	PEST	PRODUCT RATE/ ACRE PER APPLICATION	SPECIAL INSTRUCTIONS
Potato	Green peach aphids Potato aphids Colorado potato beetle Flea beetles Potato leafhopper Psyllids	<p>FOLIAR: 7.5 - 9.5 fl. oz./A 0.050 - 0.066 lb. a.i./A</p> <p><b>OR</b></p> <p>SOIL: 41.0 - 48.0 fl. oz./A 0.28 - 0.33 lb. a.i./A</p>	<p><b>Higher water volumes provide improved insect control.</b></p> <p>Begin foliar applications when first pest activity is noticed or when insects reach threshold levels per University/Extension recommendations and repeat as needed to maintain control, but not more often than every 14 days. For best results, time application before a damaging population becomes established.</p> <p>Under severe pest pressure, use the higher specified rates.</p>

The rate applied affects the length of control. Use the high rate where infestations occur later in crop development, or where pest pressure is continuous.

DINOTEFURAN 10SL may be mixed and/or alternated with commonly used insecticides to comply with local IPM and Resistance Management programs.

**Foliar Application:** Apply with air or ground equipment in adequate water for uniform coverage (3 to 10 gallons/acre by air or 10 to 50 gallons/acre by ground). Use a minimum of 50 gallons finished spray per acre for air blast application.



**Follow application instructions as indicated in Bee Hazard Direction for Use.**

**Soil Application:** See conversion chart for linear application plant application rates.

Apply specified dosage in sufficient carrier volume to insure uniform application and incorporate into the soil using one of the following methods:

- (1) In a narrow band centered on the plant row in the bedding operation just prior to planting.
- (2) In-furrow spray at planting. Direct spray in the furrow on the seed pieces or potatoes.
- (3) As a sidedress to both sides of the row or as a spray at ground crack directly over the row during hilling. Cover immediately with soil.

**RESTRICTIONS:**

For foliar applications, do not apply within 7 days of harvest.

For soil applications, apply **once** at pre-plant, pre-emergence, or at ground crack as directed above.

Do not apply more than a total of 28.5 fl. oz. of DINOTEFURAN 10SL (0.198 lb. a.i.) per acre per season as foliar sprays.

Do not apply more than a total of 48.0 fl. oz. of DINOTEFURAN 10SL (0.33 lb. a.i.) per acre per season as soil applications.

**Do not combine foliar applications with soil applications, or vice versa. Only use one application method.**

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Conversion Chart for Linear Application								
	Fluid Ounces Product / 1000 Row Feet							
Row width	20"	24"	28"	30"	32"	34"	36"	40"
Fl. oz./A								
33.0	1.2	1.5	1.7	1.9	2.0	2.1	2.2	2.5
35.0	1.3	1.6	1.8	2.0	2.1	2.2	2.4	2.6
37.0	1.4	1.7	2.0	2.1	2.2	2.4	2.5	2.8
39.0	1.5	1.8	2.1	2.2	2.3	2.5	2.6	2.9
41.0	1.6	1.9	2.2	2.3	2.5	2.7	2.8	3.1
43.0	1.6	2.0	2.3	2.5	2.6	2.8	3.0	3.3
45.0	1.7	2.1	2.4	2.6	2.8	2.9	3.1	3.4
47.0	1.8	2.1	2.5	2.7	2.9	3.1	3.2	3.6
48.0	1.8	2.2	2.6	2.8	2.9	3.1	3.3	3.7

### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Protect from direct sunlight. Store in cool, dark, and well-ventilated area. Keep container tightly closed.

**PESTICIDE DISPOSAL:** Pesticide wastes may be hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container.

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

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

[Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.]

Then offer for recycling, if available, 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.

### LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants only that the chemical composition of this product conforms to the ingredient

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statement given on the label, and that the product is reasonably suited for the labeled use when applied according to the Directions for Use.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE MANUFACTURER NEITHER MAKES NOR INTENDS ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY DISCLAIMED. To the extent consistent with applicable law, this limited warranty does not extend to the use of the product inconsistent with label instructions, warnings or cautions, or to use of the product under abnormal conditions such as drought, excessive rainfall, tornadoes, hurricanes, etc. These factors are beyond the control of the manufacturer or the seller. Any damages arising from a breach of the manufacturer's warranty shall be limited to direct damages, and shall not include indirect or consequential damages such as loss of profits or values, except as otherwise provided by law.

The terms of this Limited Warranty and Disclaimer cannot be varied by any written or verbal statements or agreements. No employee or agent of the seller is authorized to vary or exceed the terms of this Limited Warranty and Disclaimer in any manner.

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[Sub-label 2]

# DINOTEFURAN 10SL

For control of listed sucking and chewing insects infesting turfgrass and landscape ornamentals.  
For Outdoor Use Only

**Active Ingredient:**

Dinotefuran*, N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]guanidine.....	10%
Other Ingredients .....	90%
Total:	100%

\*0.89 pounds dinotefuran per gallon

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**  
*See side panels for additional precautionary statements*

FIRST AID	
<b>If Swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor for treatment advice.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If In Eyes</b>	<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 further treatment advice.</li> </ul>
<b>In On Skin Or Clothing</b>	<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 further treatment advice.</li> </ul>
<b>If Inhaled</b>	<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 mouth-to-mouth, if possible.</li> <li>• Call poison control center or doctor for treatment advice.</li> </ul>
HOT LINE NUMBER	
<p><b>Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information on (product, use, etc.), call the National Pesticides Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific time (PT), seven days a week. During other times, call the poison control center 1-800-222-1222.</b></p>	
<i>See side/back panels for additional precautionary statements</i>	

EPA Reg. No. 86203-14

EPA Establishment No.  54675-MEX-001  87590-JPN-001

Net Contents:

264.20 gallons (1000 liters) or 52 gallons (200 liters) or 2 gallons (10 liters) or 1.05 pints (500 milliliters)

Lot or Batch No.: \_\_\_\_\_

Manufactured By:

MITSUI CHEMICALS AGRO, INC.	
Shiodome City Center 1-5-2 Higashi-Shimbashi Minato-ku, Tokyo 105-7117 JAPAN	P. O. Box 5126 Valdosta, GA 31603-5126 USA

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PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION**

Harmful if swallowed or absorbed through skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Remove and wash contaminated clothing before use.

**PERSONAL PROTECTIVE EQUIPMENT (PPE).**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

**USER SAFETY REQUIREMENTS**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

**Users Should:**

- Wash hands with soap and water 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 pesticide is 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 apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not dispose equipment washwaters or rinsate into a natural drain or water body.

This product is toxic to honey bees. The persistence of residues and potential residual toxicity of Dinotefuran in nectar and pollen suggests the possibility of chronic toxic risk to honey bee larvae and the eventual instability of the hive.

- This product is toxic to bees exposed to residue for more than 38 hours following treatment.
- Do not apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period, unless the application is made in response to a public health emergency declared by appropriate state or federal authorities.

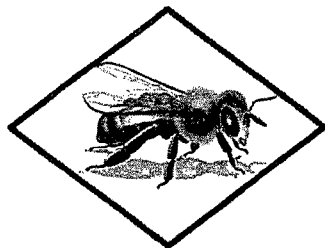
Dinotefuran and its degradate, MNG, have the properties and characteristics associated with chemicals detected in groundwater. The high water solubility of dinotefuran, and its degradate MNG, coupled with its very high mobility, and resistance to biodegradation indicates that this compound has a strong potential to leach to the subsurface under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Periodic monitoring of shallow groundwater in the use area is recommended.



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**SPRAY DRIFT ADVISORY**

Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crop thereof rendered for sale, use or consumption.

**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)

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**DIRECTIONS FOR USE**

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

**READ ENTIRE LABEL, USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**



Do not apply DINOTEFURAN 10SL while bees are foraging. Do not apply DINOTEFURAN 10SL to plants that are flowering. Only apply after all flower petals have fallen off.

**FOR COMMERCIALLY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS**



- Do not apply this product while bees are foraging.
- This product is toxic to bees exposed to residue for more than 38 hours following treatment.
- Do not apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period, unless the application is made in response to a public health emergency declared by appropriate state or federal authorities.

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 State or Tribal agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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 and notification to workers. 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.**

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
- Shoes plus socks
- Chemical resistant gloves (made of any waterproof material)

**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 (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**Do not allow others to enter treated areas until sprays have dried.**

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## APPLICATION INFORMATION

**Failure to follow directions and precautions on this label may result in plant injury, poor insect control, and/or unacceptable residues.**

### For Outdoor Use Only

- Apply DINOTEFURAN 10SL when insect pest populations begin to build, but before populations reach economically damaging levels. Economic thresholds for pests controlled by DINOTEFURAN 10SL may be available from your local agricultural authorities.
- DINOTEFURAN 10SL is a selective insecticide which should have minimal impact on beneficial arthropods and its use is compatible with integrated pest management (IPM) programs. However, DINOTEFURAN 10SL is toxic to bees exposed to direct treatment or to residue on blooming crops and weeds.
- DINOTEFURAN 10SL is taken up into foliage after application. However, thorough spray coverage is essential for optimal performance. Apply DINOTEFURAN 10SL in sufficient water to ensure good coverage.
- DINOTEFURAN 10SL may aid in the suppression of some pests. Suppression can mean either inconsistent control (good to poor), or consistent control at a level below that generally considered acceptable for commercial control.
- If the maximum season limit of DINOTEFURAN 10SL has been applied and pest populations require additional treatments, use another registered pesticide that is not in the neonicotinoid class or nitroguanidine subclass of chemistry.

### Application to Turfgrass:

Apply DINOTEFURAN 10SL through conventional spray equipment in a minimum of 1 gallon of finished spray per 1000 sq. ft. Ensure adequate distribution in the treated area using accurately calibrated equipment normally used for application of turfgrass insecticides. Use the spray pressure suggested by the equipment manufacturer to produce a uniform, medium to coarse droplet spray. Check calibration periodically to ensure that equipment is working properly. Prevent skips by using marker dyes or foam aids.

- DINOTEFURAN 10SL can be used for the control of soil inhabiting pests of turfgrass such as Masked Chafers, European Chafer, Green June Beetle, May or June Beetle, Japanese Beetle, Oriental Beetle, Billbugs, Annual Bluegrass Weevil, Black Turfgrass Ataenius, Ants (not including fireants) and Mole Crickets. DINOTEFURAN 10SL can also be used for surface feeding insects such as: armyworms, cutworms and chinchbugs in turfgrass areas.
- DINOTEFURAN 10SL can be used as directed on outdoor residential, recreational and commercial turfgrass in sites such as home lawns, commercial lawns, multi-family residential and apartment complexes, grounds or lawns around business and office complexes, shopping centers, airports, military and other institutions, cemeteries, golf courses, playgrounds, parks, athletic fields and sod farms.
- Timing of DINOTEFURAN 10SL applications must be targeted at or just prior to or during egg laying of the target pests. The need for an application can be based on historical and/or physical monitoring of the site, current season adult trapping, previous experience or other methods. Optimum control will be achieved when applications are made prior to or at egg hatch of the target pests followed by sufficient irrigation or rainfall to move the active ingredient through the turf thatch layer. Consult your local State Extension Service for more specific application timing recommendations.
- Do not apply when the target site is saturated with water. Adequate distribution of the active ingredient cannot be achieved when these conditions exist.
- Do not apply more than a total of 78.9 fl. oz. of DINOTEFURAN 10SL (0.54 lbs. a.i.) per acre per year.

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**Application to Ornamental plants:**

DINOTEFURAN 10SL can be applied using many different types of application equipment. Apply in sufficient water to ensure good coverage of ornamental plants. When making applications to plants with hard to wet foliage such as holly or pine, the addition of a spreader/sticker is recommended. If concentrate or mist type spray equipment is used, an equivalent amount of product should be used on the spray area as would be used in a dilute solution. To assure optimum effectiveness, the product must be placed where the growing portion of the target plant can absorb the active ingredient. Applications can be made to foliage or as a soil drench.

- DINOTEFURAN 10SL can be applied as a foliar spray or broadcast spray for insect control in ornamental plants in commercial or residential landscapes, greenhouses, nurseries and interior plantscapes.
- DINOTEFURAN 10SL is a systemic product and will be taken up by the root system and foliage and translocated upward throughout the plant. When applied as a foliar spray, the product offers locally systemic control of foliar pests.
- Application can be made by foliar sprays or soil applications, including soil injection, drenches, bark banding, and broadcast foliar sprays.
- When applied as a soil injection or drench to plants with woody stems, systemic activity will be delayed until the product can be translocated throughout the plant. Make applications prior to buildup of the target pest.
- For outdoor and landscape ornamentals, broadcast applications cannot exceed a total of 78.9 fl. oz. of product (0.54 lb. active ingredient) per acre per year.

**RESTRICTIONS**

- Do not graze treated areas or use clippings from treated areas for feed or forage.
- Do not apply under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.
- Prevent runoff or puddling of irrigation water following application.
- Do not apply to areas that are water logged or saturated, or frozen, which will not allow penetration into the root zone of the plant.
- Do not use on house plants grown inside residences.
- Do not apply this product, by any application method, to linden, basswood or other *Tilia* species
- Keep children and pets off treated areas until spray has dried.

**MIXING INSTRUCTIONS:**

**DINOTEFURAN 10SL Alone:** Add ½ of the required amount of water to the mix tank. With the agitator running, add the desired amount of DINOTEFURAN 10SL to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after DINOTEFURAN 10SL has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

**DINOTEFURAN 10SL + Tank Mixtures:** Add ½ of the required amount of water to the mix tank. Start the agitator running before adding any tank mix partners. In general, tank mix partners should be added in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables), liquid flowables, liquids, emulsifiable concentrates, and surfactants/adjuvants. Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all the mixture has been applied.

**NOTE:** When using DINOTEFURAN 10SL in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank mix partner, including DINOTEFURAN 10SL. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

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If using DINOTEFURAN 10SL in a tank mixture, observe all directions for use, sites, use rates, dilution ratios, precautions, and limitations which appear on the tank mix product label. No label dosage rate should be exceeded, and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are labeled.

**Compatibility: NOTE - The plant safety of all potential tank mixes on all plants has not been tested. Before applying any tank mixture not specifically recommended on this label, the safety to the target plants should be confirmed.**

DINOTEFURAN 10SL is compatible with most commonly used pesticides. However, since it is not possible to test all possible mixtures, the user should pre-test to assure the physical compatibility and lack of phytotoxic effect of any proposed mixtures with DINOTEFURAN 10SL. To determine the physical compatibility of DINOTEFURAN 10SL with other products, use a jar test, as described below:

Using a quart jar, add the proportionate amounts of the products to 1 quart of water. Add wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for additional required ingredients to the spray tank.

#### RESISTANCE MANAGEMENT RECOMMENDATIONS

DINOTEFURAN 10SL contains a Group 4A insecticide. Insect biotypes with acquired resistance to Group 4A may eventually dominate the insect population if Group 4A insecticides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by DINOTEFURAN 10SL or other Group 4A insecticides.

To delay insecticide resistance, consider:

- NOT using a foliar application of dinotefuran or any insecticide in the neonicotinoid class following an in-furrow or soil application of DINOTEFURAN 10SL.
- To optimize resistance management practices, no more than 3 applications of DINOTEFURAN 10SL per growing season are allowed.
- Avoiding the consecutive use of DINOTEFURAN 10SL or other Group 4A insecticides that have a similar target site of action, on the same insect species.
- Using tank-mixtures or premixes with insecticides from a different target site of action Group as long as the involved products are all registered for the same use and have different sites of action.
- Basing insecticide use on a comprehensive IPM program.
- Monitoring treated insect populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors, and/or manufacturers for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, you may contact Landis International, Inc., a representative of Mitsui Chemicals Agro, Inc., at toll free number: 1-800-526-3471.

#### APPLICATION PROCEDURES AND SPRAY EQUIPMENT

**Ground Application:** Select spray nozzles which will provide accurate and uniform spray deposition. Use spray nozzles which provide medium to coarse-sized droplets and reduce drift. To help insure

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accuracy, calibrate sprayer before each use. For information on spray equipment and calibration, consult nozzle manufacturers and/or State Extension Service specialists.

Apply DINOTEFURAN 10SL using sufficient water volume to provide thorough and uniform coverage. In situations where a dense canopy exists and/or pest pressure is high, use greater water volumes. The use of a spray adjuvant may improve spray coverage.

#### **APPLICATION THROUGH IRRIGATION SYSTEMS (CHEMIGATION):**

DINOTEFURAN 10SL alone or in combination with other products which are registered for application through sprinkler irrigation may be applied through irrigation systems where so noted in the soil application of each crop. DINOTEFURAN 10SL may be applied through microirrigation (individual spaghetti tube), overhead irrigation, motorized calibrated irrigation equipment, drip irrigation or trickle irrigation where so noted in the soil application of each crop, but should NOT be applied through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. 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. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

#### **Using Water from Public Water Systems:**

**DO NOT APPLY DINOTEFURAN 10 SL THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM.**

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 at least 25 individuals daily at least 60 days per year. DINOTEFURAN 10 SL may be applied through irrigation systems which may be supplied by a public water system only if the water from the public water system is discharged into a reservoir tank prior to pesticide introduction. There shall be a complete break (air gap) between the outer end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Any irrigation system using water supplied from a public water system must also meet the following requirements:

#### **Operating Instructions for All Recommended Types of Irrigation Systems:**

- The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- 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 back flow.
- The pesticide injection pipeline must also contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

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- The system must contain functional inter-locking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended.

**Calibration and Application Instructions:**

Apply DINOTEFURAN 10SL under the schedule specified in the specific crop use recommendations, not according to the irrigation schedule unless the events coincide. In general, set the equipment to apply the minimum amount of water per acre. Run the system at 86 - 90% of the manufacturer's maximum rated travel speed.

The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Users should check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

**Drip or Trickle Irrigation Equipment:**

1. Determine the acreage covered by the irrigation equipment.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20-40 minute time interval.
3. Determine the amount of DINOTEFURAN 10SL required to treat the area covered by the irrigation system.
4. Add the required amount of DINOTEFURAN 10SL, and any other tank mix partners, into the same quantity of water used to calibrate the injection period. (See "Mixing Instructions" section of this label.)
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of DINOTEFURAN 10SL per acre for either a 20-40 minute period at the end of a regular irrigation set, or as a 20-40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the insecticide by the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the DINOTEFURAN 10SL solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

**Center Pivot Irrigation Equipment:**

NOTES: 1) Use only drive systems that provide uniform water distribution. 2) Do not use end guns when chemigating DINOTEFURAN 10SL through center pivot systems because of non-uniform application. 3) Plug the first nozzle closest to the well head to protect the water source.

1. Determine the size of the area to be treated.
2. Determine the time required to apply 0.1 - 0.25 inches of water over the area to be treated when the system and injection equipment are operated at normal pressures as recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated maximum travel speed.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of DINOTEFURAN 10SL, and any tank mix partners, required to treat the area covered by the irrigation system.
5. Add the required amount of DINOTEFURAN 10SL, and any tank mix partners, and sufficient water to meet the injection time requirements to the solution tanks. (See "Mixing Instructions" section of this

label.)

6. Make sure the system is fully charged with water before starting injection of the DINOTEFURAN 10SL solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
7. Maintain constant agitation in the solution tank during the injection period.
8. Inject the specified amount of DINOTEFURAN 10SL per acre continuously for one complete revolution of the system.
9. Stop the injection equipment after treatment is complete. Continue to operate the system until the DINOTEFURAN 10SL solution has cleared all of the sprinkler heads.
10. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water.

**Solid Set, Hand Move, and Moving Wheel Irrigation Equipment:**

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20-40 minute time interval.
3. Determine the amount of DINOTEFURAN 10SL required to treat the area covered by the irrigation system.
4. Add the required amount of DINOTEFURAN 10SL, and any other tank mix partners, into the same quantity of water used to calibrate the injection period. (See "Mixing Instructions" section of this label.)
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of DINOTEFURAN 10SL per acre for either a 20-40 minute period at the end of a regular irrigation set, or as a 20-40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the insecticide by the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the DINOTEFURAN 10SL solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

**RECOMMENDATIONS TO AVOID SPRAY DRIFT**

**AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.** 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 decisions. Where states have more stringent regulations, they should be observed. Follow these recommendations to avoid spray drift:

1. Make applications when wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 10 mph. Avoid applications when wind gusts approach 10 mph.
2. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.
3. Do not cultivate or plant crops within 25 feet of the aquatic area as to allow growth of a vegetative filter strip.
4. Do not make applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with increased height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.
5. Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
6. Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage. Applications more than 10 ft. above the crop canopy should be avoided.



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7. For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or rotor diameter.

**Air Assisted (Air Blast) Tree and Vine Sprayers (Ornamentals Only):** Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream.


In addition to the general drift management principles already described, the following specific practices will further reduce the potential for drift:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage. Use a minimum of 50 gallons finished spray per acre.
- Do not allow spray to go beyond the edge of the cultivated area. Spray the outside row only from outside the planting.

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### ORNAMENTAL PLANTS

For insect control in ornamental plants grown in commercial, industrial, and residential areas, and outdoor nursery and greenhouse ornamental production.

Crop	Pest	Product Rate	Remarks
Ornamental plants including: Shrubs Ornamentals Flowering Plants Foliage Plants Ground Covers Evergreens Ornamental Trees Non-Bearing Fruit Trees Non-Bearing Nut Trees Non-Bearing Vines	Adelgids Aphids Japanese beetles (adults) Lacebugs Leaf beetles Leafhoppers Leafminers Mealybugs Sawfly larvae Thrips (suppression) Whiteflies Giant whitefly Greenhouse whitefly Silverleaf whitefly	<b>Foliar Spray</b> 8 fl. oz. to 16 fl. oz. per 100 gallons 	For foliar insect control on ornamental plants. Start treatment prior to buildup of high pest populations.  <b>Foliar Spray:</b> 100 gallons of spray mix will treat 20,000 sq. ft. of area.  <b>Follow application instructions as indicated in Bee Hazard Direction for Use.</b>
	Aphids Whiteflies Giant whitefly Greenhouse whitefly Silverleaf whitefly	<b>Drench</b> 38 fl. oz. to 78 fl. oz. per 100 gallons	<b>Drench:</b> Apply 4 fl. oz. of finished solution per 6" pot.

**Important Notes:**

Apply in sufficient water to ensure thorough coverage of target area. Use a minimum of 50 gallons finished spray per acre.

**RESTRICTIONS:**

Do not apply more than a total of 78.9 fl. oz. of product (0.54 lb. active ingredient) per acre per year.  
 Not for use on house plants grown inside private residences.

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**TURFGRASS**

For outdoor residential, recreational and commercial turfgrass in sites such as home lawns, commercial lawns, multi-family residential and apartment complexes, grounds or lawns around business and office complexes, shopping centers, airports, military and other institutions, cemeteries, golf courses, playgrounds, parks, athletic fields and sod farms.

Crop	Product Rate	Pest	Remarks
Turfgrasses Residential Recreational Commercial	78.9 fl. oz./A 1.8 fl. oz. per 1000 sq. ft.  (0.54 lbs. a.i./ A)	Annual bluegrass weevil Billbug . . .	Make application prior to or during egg hatch of the target pest or apply at first appearance of young larvae.
		Ants (not including fire ants)	Apply at first appearance of ants that are actively foraging.
		Chinchbug	Make application prior to hatching of the first instar nymphs or when turf damage first appears.
		European Cranefly	Spring applications as a curative control when larvae are mature but prior to pupation generally March and April.  Apply Fall applications soon after egg hatch.
		<b>Mole cricket</b> Southern mole cricket Tawny mole cricket	Make application prior to or during the peak egg hatch period. When adults or large nymphs are present and actively tunneling, tank mix with a curative insecticide.
		<b>White grub larvae such as:</b> Asiatic garden beetle Black Turfgrass atenius European chafer Green June beetle Japanese beetle May/June beetle Northern masked chafer Oriental beetle Southern masked chafer	Make application prior to or during egg hatch of the target pest.
		Armyworm Cutworms Sod webworm	Apply at first appearance while pests are small.

**Notes:**

- Apply in sufficient water to ensure thorough coverage of target area. Use a minimum of 50 gallons finished spray per acre.
- Consult your local State Extension Service or State Extension Turfgrass Specialists for more specific information on timing of insecticide applications.
- Irrigate turf if rainfall does not occur within 24 hours after application to ensure movement of the active ingredient through the thatch.
- Avoid mowing turf or lawn grass until after sufficient irrigation or rainfall has occurred so that uniformity of application will not be affected.

**RESTRICTIONS:**


Do not make more than one application per year.

Do not apply more than a total of 78.9 fl. oz. of DINOTEFURAN 10SL (0.54 lbs. a.i.) per acre per year.

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**FOLIAR APPLICATIONS TO LANDSCAPE ORNAMENTAL PLANTS**

For insect control on landscape ornamental plants in commercial, industrial and residential areas, parks, golf courses, athletic fields, and schools.

Crop	Pest		Product Rate/ Acre Per Application
Ornamental plants including but not limited to: Bedding Plants Shrubs Ornamentals Flowering Plants Foliage Plants Groundcovers Evergreens Ornamental Trees Non-Bearing Fruit Trees Non-Bearing Nut Trees Non-Bearing Vines	Adelgids including: Hemlock Woolly Balsam Woolly Aphids (suppression) Japanese beetles (adults) Lacebugs including: Azalea Cotoneaster Hawthorne Rhododendron Leaf beetles including: Viburnum Leafhoppers including: Glassy Winged Sharpshooter Potato Leafminers including: Serpentine Mealybugs including: Citrus Long-Tailed Madeira Obscure Phormium Pink Hibiscus	Psyllids including: Asian Citrus Root Weevils (adults) including: Black Vine Diaprepes Sawfly larvae Scale (Armored and Soft) including: Cyptomeria Cycad Aulacaspis Elongate Hemlock Euonymus Florida Red Florida Wax Tea Thrips including: Chilli Gynaikothrips uzeli Western Flower (suppression) Whiteflies including: Giant Greenhouse Silverleaf / Sweet potato (B and Q biotypes)	8 - 16 fl. oz. per 100 gallons  17.4 - 34.8 fl. oz./ Acre  <b>Foliar Spray:</b> 100 gal of spray mix will treat 20,000 sq. ft. of area.    <b>Follow application instructions as indicated in Bee Hazard Direction for Use.</b>

**Remarks:**

Start treatment prior to buildup of high pest populations. Apply in sufficient water to ensure thorough coverage of target area. Use a minimum of 50 gallons finished spray per acre. [Use a minimum of 1 gallon of finished spray per 1000 square feet ]

**RESTRICTIONS:**

Do not apply more than a total of 78.9 fl. oz. of product (0.54 lb. active ingredient) per acre per year.

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**SOIL APPLICATIONS TO LANDSCAPE ORNAMENTAL PLANTS**

For systemic insect control on landscape ornamental plants in commercial, industrial and residential areas, parks, golf courses, athletic fields, and schools, as a soil drench or soil injection.

Crop	Pest	Product Rate/ Acre Per Application
Ornamental plants including but not limited to: Bedding Plants Shrubs Ornamentals Flowering Plants Foliage Plants Groundcovers Evergreens Ornamental Trees Non-Bearing Fruit Trees Non-Bearing Nut Trees Non-Bearing Vines	Adelgids including: Hemlock Woolly Balsam Wobly Aphids including: Balsam Crepe Myrtle Green Peach Melon Bagworms Flatheaded Borers including: Alder Bronze Birch Emerald Ash Flatheaded Appletree Two-Lined Chestnut Froghoppers Fungus Gnats (larvae) Horned Oak Gall Lacebugs including: Azalea Cotoneaster Hawthorne Rhododendron Leaf beetles including: Elm Viburnum Leafhoppers including: Glassy Winged Sharpshooter Potato Leafminers including: Birch Boxwood Holly Serpentine Mealybugs including: Citrus Long-Tailed Madeira Obscure Phormium Pink Hibiscus Root Pine tip moth (larvae) Plantbugs Psyllids including: Asian Citrus Boxwood Root Weevils (larvae and adults) including: Black Vine Diaprepes	Roundheaded Borers <i>excluding Asian Longhorned beetles</i> including: Eucalyptus Longhorned Linden Locust Royal Palm Bug Sawfly larvae Scale (Armored and Soft) including: Azalea Bark Brown Soft Calico Cottony Cushion Cycad Aulacaspis Cypotomeria Duplacionapis Elongate Hemlock Euonymus False Oleander Fig Wax Fletcher Florida Red Florida Wax Lecanium Oystershell Poplar (Aspen) Pine needle Tea Tulip Tree Spittlebugs Thrips including: Chilli (suppression) Cuban Laurel Gladiolus Gynaikothrips uzeli (suppression) Western Flower (suppression) Treehoppers Whiteflies including: Ficus Giant Greenhouse Silverleaf / Sweet potato (B and Q biotypes) White Grubs including: Oriental Beetle White Pine Weevil
		<p><b>Shrubs:</b> 0.2 to 0.4 fl. oz. per foot of height (2 to 4 fl. oz. per 10 feet of height).</p> <p><b>Trees:</b>                      Small Trees (Less than 24 inches diameter at breast height):                      0.2 to 0.8 fl. oz. per inch diameter at breast height (DBH).                      Large Trees (24 inches diameter or greater at breast height):                      0.4 to 0.8 fl. oz. per inch diameter at breast height (DBH)</p>

**Notes:**

Do not apply more than a total of 78.9 fl. oz. of DINOTEFURAN 10SL (0.54 lbs. a.i.) per acre of nursery or landscape per year. For multi-stem trees, base rate on cumulative inches of diameter of all stems at breast height. Apply early in the plant's annual growing cycle and keep soil moist for at least 7 days after application. Only apply to moist soil. Heavy rainfall or inadequate irrigation immediately following application may decrease performance. Use higher labeled rates for broadleaf evergreens with dense foliage (i.e. hollies)

**Soil Injection:** Mix required dose in water and make at least 4 injections per shrub or tree with a low-pressure applicator. Use same amount of solution per hole. Injections can be made using the following methods:

- **Grid system** – Space injections on a 2.5 foot center extending to drip line
- **Circle System** – Make injections in concentric circles extending inward from the drip line.
- **Basal System** – Space injection evenly around trunk no more than 12 inches out from the base.

Inject at least 1 quart of dilute solutions per foot of height or inch of trunk diameter.

**Soil Drench:** Mix required dose in water and uniformly apply to soil around base of shrub or tree. Pull back mulch before drenching. Apply at least 1 quart of dilute solutions per foot of height or inch of trunk diameter. If lower drench volume is used, apply 1/2 inch of irrigation immediately after application to move the product into the root zone. Keep soil moist for at least 7 days after application.

**RESTRICTIONS:**

Do not apply to dry, saturated or frozen soil.

**BARK BANDING APPLICATIONS TO LANDSCAPE ORNAMENTAL PLANTS**

For systemic insect control on landscape trees and shrubs in commercial, industrial and residential areas, parks, golf courses, athletic fields, and schools, when applied as a trunk spray.

Crop	Pest	Product Rate/ Acre Per Application	Remarks
Ornamental plants including but not limited to:  Shrubs Ornamental Trees Non-Bearing Fruit Trees Non-Bearing Nut Trees	Adelgids including: Hemlock Woolly Aphids Flatheaded Borers including: Alder Bronze Birch Emerald Ash Flatheaded Appletree Two-Lined Chestnut  Lacebugs Leafbeetles Leafhoppers Leafminers Mealybugs Pine Tip Moth (Larvae) Psyllids Roundheaded Borers <i>excluding Asian Longhorned beetles</i> Scales including Calico Thrips (suppression) Whiteflies including Ficus	16 fl. oz. plus 1.0 fl. oz. of organosilicone surfactant. Add to 1.0 gallon of water.  (0.11 lbs. a.i./ gallon)	When sprayed on the trunk, DINOTEFURAN 10SL will be absorbed through the bark and into the vascular system, and then transported throughout the tree. Speed of control will be dependent on tree size, tree health, environmental conditions and how actively pests are feeding.  Spray bark on root flare (buttress roots) and on trunk between soil surface and 4 to 5 feet above the soil surface. Adjust nozzle to uniformly distribute spray over the entire circumference of the tree trunk and buttress roots. Wet bark just to the point of saturation and run off onto soil.

**Notes:**

Apply with a low volume sprayer operated at 10 to 20 PSI to prevent tree damage, bounce back and drift.

Apply to actively growing trees and time application that DINOTEFURAN 10SL has had time to move to insect feeding sites at when target life stage is present.

Control may be less effective in trees with thick bark, and at times when trees are not actively growing or transpiring.

One gallon of spray solution will treat approximately 36 to 40 inches of tree diameter when measured at 4.5 feet above the soil line (DBH). Spray solution on tree trunk between soil surface and 4 to 5 feet above the soil surface.

**RESTRICTIONS:**

Do not make more than one application per year.

Do not apply to wet bark, during rainfall or if rain is expected within 12 hours.

Do not apply more than a total of 78.9 fl. oz. of DINOTEFURAN 10SL (0.54 lbs. a.i.) per acre of nursery or landscape per year.

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**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Protect from direct sunlight. Store in cool, dark, and well-ventilated area. Keep container tightly closed.

**PESTICIDE DISPOSAL:** Pesticide wastes may be hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container.

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

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

[Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.]

Then offer for recycling, if available, 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.

**LIMITED WARRANTY AND DISCLAIMER**

The manufacturer warrants only that the chemical composition of this product conforms to the ingredient statement given on the label, and that the product is reasonably suited for the labeled use when applied according to the Directions for Use.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE MANUFACTURER NEITHER MAKES NOR INTENDS ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY DISCLAIMED. To the extent consistent with applicable law, this limited warranty does not extend to the use of the product inconsistent with label instructions, warnings or cautions, or to use of the product under abnormal conditions such as drought, excessive rainfall, tornadoes, hurricanes, etc. These factors are beyond the control of the manufacturer or the seller. Any damages arising from a breach of the manufacturer's warranty shall be limited to direct damages, and shall not include indirect or consequential damages such as loss of profits or values, except as otherwise provided by law.

The terms of this Limited Warranty and Disclaimer cannot be varied by any written or verbal statements or agreements. No employee or agent of the seller is authorized to vary or exceed the terms of this Limited Warranty and Disclaimer in any manner.