

100-943

11/22/2013

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



OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

November 22, 2013

Mr. Charles T. Levy  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, NC 27419

Subject: Amended label to add pollinator protection language  
Product Name: Meridian 25WG  
EPA Reg. No. 100-943  
EPA Decision No. 484081  
Submission dated September 25, 2013; resubmission dated November 20, 2013

Dear Mr. Levy:

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

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

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

If these conditions are not complied with, EPA will take appropriate action against this registration. If you have any questions please contact Julie Chao at 703-308-8735 or [chao.julie@epa.gov](mailto:chao.julie@epa.gov).

Regards,

A handwritten signature in black ink that reads "Venus Eagle". The signature is fluid and cursive, with a long horizontal line extending to the right.

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

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Meridian 25WG (100-943)

[Master Label]

GROUP 4A INSECTICIDE

# MERIDIAN® 25WG

## Insecticide

For foliar and systemic control of insect pests in turfgrass, sod farms, interiorscape and landscape plants.

### Active Ingredient:

Thiamethoxam<sup>1</sup> ..... 25.0%

Other Ingredients ..... 75.0%

Total: ..... 100.00%

<sup>1</sup> CAS No. 153719-23-4

Meridian 25WG is a water-dispersible granule that contains 4 ounces of active ingredient per pound of formulated product.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

EPA Reg. No. 100-943

[EPA Est. No. placeholder]

[Net Contents placeholder]

Net Weight

ACCEPTED  
NOV 22 2013  
Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for the  
pesticide registered under:

EPA. Reg. No: 100-943

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<b>FIRST AID</b>	
<b>If 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 treatment advice.</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 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 a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>NOTE TO PHYSICIAN</b>	
There is no specific antidote if Meridian 25WG is ingested. Induce emesis or lavage stomach. Treat symptomatically.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOT LINE NUMBER</b>	
For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call <b>1-800-888-8372</b>	

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## PRECAUTIONARY STATEMENTS

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### Hazards to Humans and Domestic Animals

#### CAUTION

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

### Personal Protective Equipment

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material—Category A (e.g., natural rubber  $\geq$  14 mils)
- Shoes plus socks
- Protective eyewear

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.

### Engineering Control Statements

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

### User Safety Recommendations

#### Users should:

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

### Environmental Hazards

This pesticide is toxic to wildlife and highly toxic to aquatic invertebrates.

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This product is highly toxic to bees exposed to direct treatment or residues on blooming crops/plants or weeds. Do not apply this product or allow it to drift to blooming crops/plants or weeds if bees are foraging.

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift or runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or disposing of equipment wash water.

- **Surface Water Advisory**

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff (See manual at the following internet address: <http://www.wsi.nrcs.usda.gov/products/W2Q/pest/core4.html>.)

Run-off of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours.

- **Ground Water Advisory**

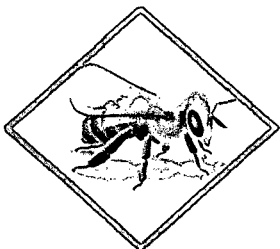
Thiamethoxam has properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow may result in ground water contamination.

- **Spray Drift Advisory**

Do not allow this product to drift.

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## 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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**Physical or Chemical Hazards**

Do not use, pour, spill or store near heat or open flame.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and, (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.



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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.

**See individual use sites for specific pollinator protection application restrictions. If none exist, follow these directions for foliar applications to commercially-grown plants and ornamentals that are attractive to pollinators and non-agricultural use sites:**

### **FOR FOOD/FEED 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. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

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

### **FOR NON-AGRICULTURAL USES**



- Do not apply Meridian 25WG while bees are foraging. Do not apply Meridian 25WG to plants that are flowering. Only apply after all flower petals have fallen off.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

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For any requirements specific to your State or Tribe, consult the 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, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material – Category A (e.g., natural rubber  $\geq$  14 mils)
- Shoes plus socks
- Protective eyewear

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**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 enter treated areas without protective clothing until sprays have dried.

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR INSECT CONTROL, AND/OR ILLEGAL RESIDUES.**

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## Meridian 25WG (100-943)

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### USE INFORMATION

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Meridian 25WG is a broad-spectrum insecticide that is effective when applied at label rates to turfgrass, plant foliage and soil.

Meridian 25WG is active against many sucking and chewing insect pests by contact and ingestion. Meridian 25WG is relatively short-lived on the surface of plant foliage, readily absorbed into plant tissues, and rainfast once it has dried. The rapid translaminar absorption and distribution within leaves provides excellent residual control of foliar-feeding insects.

In the soil, the active ingredient in Meridian 25WG will control soil pests upon contact or ingestion and is also readily taken up by plant roots. The active ingredient moves upwards in the plant to the site of pest infestation.

Through feeding on the plant, pests are exposed to the active ingredient in Meridian 25WG. Feeding will stop within minutes to hours of exposure and be followed by death of the pest. The moderate persistence of Meridian 25WG in the soil and foliage also provides residual control of labeled pests. Meridian 25WG is not active as an ovicide or as an insect growth regulator. Because residues on leaf surfaces are quickly degraded, Meridian 25WG is compatible with beneficial arthropods.

#### **Resistance Management**

Meridian 25WG belongs to the neonicotinoid class of chemistry (Group 4A Insecticide). Pests which are resistant to insecticides in other chemical classes are not known to be cross-resistant to Meridian 25WG. However, insect pests are known to develop resistance to products used repeatedly. Because resistance development cannot be predicted, the use of Meridian 25WG should conform to sound resistance management strategies established for the crop and use area. Strategies should include rotation of chemicals with different modes of action, limitation of the number of successive generations of the target pest being treated with the same compound and adherence to labeled directions.

Consult your local pest control advisor or extension office for additional methods for preventing resistance development. SYNGENTA encourages responsible product stewardship to ensure effective long-term control of the insect pests on this label.

## Meridian 25WG (100-943)

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**MIXING PROCEDURES**

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Prepare only the amount of spray mixture that is needed for the immediate application. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.

**Meridian 25WG Alone**

Add 1/2 of the required amount of water to the mix tank. With the agitator running, add the Meridian 25WG to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the Meridian 25WG has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

**Meridian 25WG + Tank Mixtures**

Meridian 25WG is compatible with many other commonly used insecticides, fungicides, liquid fertilizers. Check compatibility before tank mixing.

Add 1/2 of the required amount of water to the mix tank. Start the agitator running before adding any tank mix partners. Add tank mix partners in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables) such as Meridian 25WG, liquid flowables, liquids and emulsifiable concentrates. 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 Meridian 25WG in tank mixtures, add all products in water-soluble packaging to the tank before any other tank mix partner, including Meridian 25WG. 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 Meridian 25WG in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank mix product label. Do not exceed any dosage rate, and follow the most restrictive label precautions and limitations. Do not mix this product 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.

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### **Compatibility**

Meridian 25WG is compatible with most insecticide, fungicide, and foliar nutrients products. However, test the physical compatibility of Meridian 25WG with tank-mix partners before use. To determine the physical compatibility of Meridian 25WG 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 adding required ingredients to the spray tank.

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**FIRE ANTS - INDIVIDUAL MOUND TREATMENTS (TURFGRASS AND SOIL OF ORNAMENTAL PLANTS)**

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**Application Rate**

For control of fire ants (*Solenopsis* species), prepare a drench solution at a concentration of 1–3 ounces of Meridian 25WG per 10 gallons of water. Thoroughly mix solution and apply directly to mounds. For optimum control of small ant mounds (<6 inches in diameter at the surface) apply one gallon of the drench solution per mound. For optimum control of larger ant mounds, apply 2–3 gallons of the drench solution per mound. Direct the drench application at the center of the mound and include a 6 inch diameter circle around the center of the mound. Do not apply less than 0.5 gallon or more than 3 gallons of drench solution per mound.

**Application Timing**

For control of fire ants, make a single drench application when mounds appear to be active.

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**APPLICATION TO TURFGRASS**

**Sites of Application**

Meridian 25WG can be applied to turfgrass on: golf courses, residential lawns, commercial grounds (i.e., office and shopping complexes, airports), parks, playgrounds, athletic fields and sod farms.

**Restrictions:**

- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply more than 17 ounces of Meridian 25WG (0.266 pounds thiamethoxam) per acre per year

**Broadcast Applications to Turfgrass**

Apply Meridian 25WG as a broadcast application to turfgrass for control of targeted pests. Use sufficient water volume (1.5–5 gallons/ 1000 square feet) to uniformly distribute Meridian 25WG over the area being treated and to adequately move the active ingredient into the canopy and thatch layers.

To help prevent grubs, irrigate within seven (7) days of application to move Meridian 25WG into the root zone where grubs feed. To control grubs, irrigate within one (1) day of application to move Meridian 25WG into the root zone where grubs feed. Maintain adequate soil moisture before and after application for optimum control and healthy turfgrass growth. Excessively wet or dry conditions may impact the performance of Meridian 25WG against white grubs and mole crickets. Do not mow turf until the treated area has been irrigated or rainfall has occurred to allow for maximum and uniform uptake into turfgrass.

**Applications to Turfgrass**

Use sites include turfgrass on golf courses, residential lawns, commercial grounds (i.e., office and shopping complexes, airports), parks, playgrounds, athletic fields, and sod farms.

Use Pattern	Pests	Application Timing	Dosage of Meridian 25WG
Broadcast	Larvae (white grubs) of: <i>Aphodius</i> species Asiatic garden beetle Billbugs ( <i>Sphenophorus</i> species) Black turfgrass ataenius European chafer Green June beetle	Apply up to 45 days before the historical peak of adult flight to 2 <sup>nd</sup> instar grub of the species being targeted.  For optimum control, treat from peak flight to peak egg hatch.	3 to 4 oz per 10,000 sq ft  or 12.7 to 17 oz per acre



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	<p>Japanese beetle            May or June beetle  <i>(Phyllophaga species)</i>            Northern masked chafer            Oriental beetle            Southern masked chafer</p>	<p>To control grubs, make the application from egg hatch to second instar (grubs less than half their full size).</p>	
	<p><b>Craneflies</b>  <i>(Tipula species)</i></p>	<p>For optimum control, apply at oviposition (egg lay)</p>	
	<p><b>Mole crickets</b> (suppression)  <i>(Scapteriscus species)</i></p>	<p>To suppress damage, treat from first egg hatch to peak egg hatch.            See note below.</p>	
	<p><b>Chinch bugs</b>  <i>(Blissus species)</i></p>	<p>Apply when young nymphs are first observed.</p>	
	<p><b>Flea beetles</b>  <b>Greenbugs</b>  <b>Leafhoppers</b>  <b>Sod webworms</b>  <b>Spittlebugs</b></p>	<p>For optimum control, make application when populations are first observed.</p>	
	<p><b>Ants</b> (excluding Carpenter, Fire, Harvester, and Pharaoh ants)</p>	<p>To control ants, treat when ant mounds are first observed. To achieve optimum control on green and tee surfaces, treat the affected area plus a surrounding 30 foot buffer. For fairways and roughs, treat at least 1.5 times the infested area. Water in to adequately move active ingredient to target area. For additional knockdown activity, utilize with Scimitar GC Insecticide in an insect control spray program. Consult the Scimitar GC Insecticide label for use.</p>	
<p><b>Individual Fire Ant Mounds</b></p>	<p><b>Fire Ants</b>  <i>(Solenopsis species)</i></p>		

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	Refer to "FIRE ANTS - INDIVIDUAL MOUND TREATMENTS (TURFGRASS AND SOIL OF ORNAMENTAL PLANTS)" section of label.		
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For specific information about developmental stages of the target pest and optimal timing of applications, consult with your State Cooperative Extension Service.

**Note:** For turf with heavy thatch (more than 0.75 inches), use the higher rates within the specified range. Meridian 25WG is not phytotoxic to any major turfgrass species.

**Note:** Meridian 25WG provides suppression of mole crickets on turfgrass. Suppression can mean either erratic control, ranging from good to poor, or a consistent level of control below that generally acceptable for commercial purposes.

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**APPLICATION TO INTERIORSCAPE AND LANDSCAPE ORNAMENTAL PLANTS**

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**Sites of Application**

Meridian 25WG can be applied to ornamentals grown in residential and commercial landscapes, parks, golf courses and interiorscapes.

**Restriction:**

- **DO NOT** exceed 17 ounces of Meridian 25WG (0.266 pounds Thiamethoxam) per acre per year.

**Application Methods**

Meridian 25WG is an effective insecticide when applied to plant foliage, soil or soil-less media, and fire ant mounds.

**Foliar Application**

Make foliar applications in an adequate water volume to achieve thorough and uniform coverage without excessive runoff (to drip). On hard to wet plants, spray adjuvants that improve wetting of foliage are recommended. Do not use spray adjuvants that may bind Meridian 25WG to the leaf surface, which would limit absorption into the foliage.

Meridian 25WG can be applied in a range of spray volumes (concentrate to dilute spray volumes) provided thorough and uniform coverage is obtained. For concentrate sprays (i.e., ULV, foggers, air assist equipment), apply the same amount of Meridian 25WG per unit area as would be used in a dilute spray volume over the same area.

Begin applications when labeled pests first appear or when economic thresholds have been reached. Repeat applications as necessary to maintain control, but no sooner than every 7 days.

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**Foliar Applications to Interiorscape and Landscape Ornamental Plants**

Plant type	Pests	Dosage of Meridian 25WG	Application Timing
Trees Shrubs Evergreens Flowers Foliage Plants Groundcovers Interior Plantscapes	Ants (excluding Carpenter, Fire, Harvester, and Pharaoh ants) Aphids Lace Bugs Leafhoppers Leaf Beetles Tent caterpillars	2 to 4 oz per 100 gals	Apply when pests are first observed. Reapply as needed but no sooner than every 7 days.  For gall makers, apply during egg laying of the generation being targeted. For leafhoppers, plant bug, and aphids make the first application when populations are first observed. Repeat applications as necessary to maintain control, but no sooner than 7 days after the last application.
	Adelgids (including Hemlock woolly adelgid) Flea Beetles Japanese beetle adults Leaf gall forming insects Leafminers Mealybugs Midges Plant Bug Psyllids (including Asian Citrus Psyllid) Sawflies Soft Scales Spittlebugs Thrips foliar feeding (suppression) Whiteflies	4 to 8.5 oz per 100 gals	For concentrated spray volumes, apply the same amount of product per unit area as would be applied with dilute spray volumes.  Apply to landscape ornamental plants to reduce populations of aphids, whiteflies, and mealybugs, which produce honeydew which serves as a food source for some ant species. Use a 0.0038% to 0.01% liquid dilution (2-8 oz of Meridian 25WG in 100 gals water) as a foliar or banded application. The 0.01% dilution may be applied up to 2 gals/1,000 sq ft. Re-treat as necessary to maintain control. Do not exceed 17 oz of Meridian 25WG per acre per year.

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	Adult Black vine weevil (suppression)	4 oz per 50 gals or 8 oz per 100 gals	Apply to foliage of plants when adult feeding damage is first observed. Make only one application per generation.  For concentrated spray volumes, apply the same amount of product per unit area as would be applied with dilute spray volumes. For best control, use in a rotational spray program with Scimitar CS Insecticide. Consult Scimitar CS Insecticide label for use.
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For specific information about developmental stages of the target pest, associated damage and action thresholds to properly time applications consult with your State Cooperative Extension Service.

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## Meridian 25WG (100-943)

### **Application to Soil and Soil-less Media of Ornamental Plants**

Meridian 25WG is effective as a soil and systemic insecticide when applied to the soil or soil-less media using broadcast, soil injection, or soil drench applications.

As a broadcast application, use sufficient water volume (1.5–5 gallons/1000 square feet) to uniformly distribute Meridian 25WG at the labeled rate over the area being treated.

For soil injection around trees and shrubs, uniformly select sites and evenly distribute Meridian 25WG solution among injection sites.

For soil drench applications around the base of trees and shrubs, apply the proper rate uniformly in a minimum of 16 fluid ounces of solution per inch diameter of breast height (D.B.H.) or per foot of shrub height.

Meridian 25WG must move to the feeding site of the target pest, whether this is in the root zone or the above ground portion of the host plant. Therefore, control of pests from the systemic activity of Meridian 25WG may be delayed for one or more weeks depending on plant size, rate of uptake from the soil or rate of translocation within the plant. Systemic activity in large plants may require several weeks before control of stem and foliar pests is achieved. If economic thresholds for target pests are low, or plants are historically damaged, apply Meridian 25WG preventatively (before pests are evident) to the growing media.

Irrigate within 3 days of treatment (optimally within 24 hours) to move Meridian 25WG into the root zone of plants or to the location of soil-dwelling pests. Do not over irrigate during the first seven days after treatment or reduced efficacy may occur.

Meridian 25WG (100-943)

**Applications to Soil of Ornamentals Plants**

For plants grown in residential and commercial landscapes, parks, golf courses and interiorscapes.

**A. Soil-Inhabiting Pests**

Plant Types	Pests	Dosage of Meridian 25WG	Application Timing
All plant types	<b>Larvae (Grubs) of:</b> <i>Aphodius</i> species Asiatic garden beetle Black turfgrass ataenius European chafer Green June beetle Japanese beetle May or June beetle ( <i>Phyllophaga</i> species) Northern masked chafer Oriental beetle Southern masked chafer	12.7 to 17 oz per acre  or  3 to 4 oz per 10,000 sq ft	<b>Application Timing for Grubs:</b> Apply up to 45 days before the historical peak of adult flight to 2 <sup>nd</sup> instar grub of the species being targeted. For optimum control, treat from peak flight to peak egg hatch. To control grubs, make the application from egg hatch to second instar (grubs less than half their full size).
	<b>Fire Ants</b> ( <i>Solenopsis</i> species) Refer to "FIRE ANTS - INDIVIDUAL MOUND TREATMENTS (TURFGRASS AND SOIL OF ORNAMENTAL PLANTS)" section of label.		

- Note: If leaching, wait a minimum of 7 days after application to allow for maximum uptake of Meridian 25WG by the plant's root system.
- Apply to the soil preventively in situations where tolerance of insects or damage is low. Allow a minimum of one week for smaller plants and at least 2 weeks for large plants to translocate Meridian 25WG to feeding sites of the target pest.
- Irrigate after application for optimal performance.
- Do not exceed 17 ounces/Acre per year when making applications to the soil for ornamentals.

For specific information about developmental stages of the target pest, associated damage, and action thresholds to properly time applications, consult with your State Cooperative Extension Service. Refer to additional comments under Use Information section relating to ornamental applications to soil and related irrigation events.

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**B. Above Ground Pests**

Pests	Plant Types	Dosage of Meridian 25WG	Application Instructions
<p>Adelgids Aphids Lace Bugs Flea beetles Japanese beetle adults Leaf beetles Leafminers Mealybugs Root aphids Root Weevil larvae (including <i>Diaprepes abbreviatus</i>) Sawflies Soft Scales Spittlebugs Tent caterpillars Thrips-foliar feeding (suppression) Whiteflies</p>	<p><b>Trees</b></p>	<p><b>Single Tree</b> 0.07 to 0.14 oz (2 to 4 gm) per one inch of tree trunk diameter (D.B.H.)</p>	<p><b>Soil Injection Method For Trees</b> <i>Basal System:</i> Apply the proper rate among 4 evenly spaced injection sites located within a foot of each trunk. <i>Grid System:</i> Apply the proper rate among injection sites on a grid pattern with 1.5–2.5 feet centers extending to the drip line of the tree. <b>Soil Drench</b> Apply the proper rate uniformly around the base of the tree within 1–2 feet of the trunk. Drench targeted area with the Meridian 25WG solution without runoff. Use a minimum of 16 fluid ounces solution per inch D.B.H. Irrigate after application for optimal performance.</p>
	<p><b>Shrubs</b></p>	<p><b>Single Shrub</b> 0.07 to 0.14 oz (2 to 4 gm) per foot of shrub height</p> <p><b>Hedge Row</b> 0.07 to 0.14 oz (2 to 4 gm) per foot of shrub height (&lt;6' tall) per plant</p>	<p><b>Soil Injection Method For Shrubs</b> Within the canopy, apply the proper rate among a minimum of 4 evenly spaced injection sites per shrub. For multiple plants (hedge row), determine the number of plants per hedge row, multiply by the average height and rate to be applied per foot of height. <b>Soil Drench</b> Apply the proper rate uniformly around the shrub within 1–2 feet of the base. Drench targeted area with the Meridian solution without runoff. Use a minimum of 16 fluid ounces solution per foot shrub height. For multiple plants (hedge row), determine</p>



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			the number of plants per hedge row, multiply by the average height and rate to be applied per foot of height. Irrigate after application for optimal performance.
	<b>Annuals &amp; small woody landscape plants</b>	3 to 4 oz per 10,000 sq ft	Apply as a broadcast treatment to the soil directed to the plant root zone. Irrigate after application for optimal performance.

**Application Timing for Above-Ground Pests:**

**To Help Prevent Pests:** Apply 1 to 4 weeks before pest has historically been observed.

**To Control Pests:** Allow 1 to 4 weeks for reduction in pest density to occur.

Note: Larger plants require the longer interval.

- Note: If leaching, wait a minimum of 7 days after application to allow for maximum uptake of Meridian 25WG by the plant's root system.
- Apply to the soil preventively in situations where tolerance of insects or damage is low. Allow a minimum of one week for smaller plants and at least 2 weeks for large plants to translocate Meridian 25WG to feeding sites of the target pest.
- Do not exceed 17 ounces/Acre per year when making applications to the soil for ornamentals.

For specific information about developmental stages of the target pest, associated damage, and action thresholds to properly time applications, consult with your State Cooperative Extension Service. Refer to additional comments under Use Information section relating to ornamental applications to soil and related irrigation events.

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## **STORAGE AND DISPOSAL**

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

### **Pesticide Storage**

Store in a cool, dry place.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup, procedures and disposal of wastes.

### **Pesticide Disposal**

Pesticide wastes are toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used according to label instruction, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

### **Container Handling [plastic container]**

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. 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  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling 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.

### **Container Handling [bag]**

Non-refillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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Manufactured for:  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, North Carolina 27419-8300

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