

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON. DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

March 31, 2016

Ronald E. Hampton, Ph.D. Regulatory Product Manager, Lawn and Garden Syngenta Crop protection, LLC P.O. Box 18300 Greensboro, NC 27419

Subject: Label Amendment – Reformatted turf, ornamentals, and vegetable and herb

section's directions for use; Deleted row crop uses and indoor residential mold

protection uses; Updated Environmental Hazards language; Added plant

performance statement and made some other formatting edits.

Product Name: Heritage Fungicide EPA Registration Number: 100-1093 Application Date: May 19, 2015 Decision Number: 505347

### Dear Dr. Hampton:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

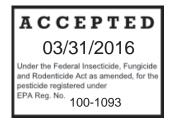
Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Aswathy Balan by phone at 703-347-0510, or via email at balan.aswathy@epa.gov.

Shaja B. Joyner, Product Manager 20

Fungicide-Herbicide Branch Registration Division 7505P



## [MASTER]

GROUP 11 FUNGICIDE

# Heritage<sup>®</sup> Fungicide

Broad-spectrum fungicide for the prevention and control of diseases of turf and ornamentals, and transplants of fruit and nut trees, and vegetable and herb plants.

**Active Ingredient** 

Azoxystrobin: methyl (*E*)-2-{2-[6-(2-cyanophenoxy)

pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate*	50%
Other Ingredients:	50%
Total:	

Heritage Fungicide is a water-dispersible granule (WG) containing 0.5 lb azoxystrobin per lb product.

\*IUPAC

### KEEP OUT OF REACH OF CHILDREN.

# **CAUTION**

See additional precautionary statements and directions for use inside booklet.

Reformulation is prohibited. See individual container labels for repackaging limitations.

EPA Reg No. 100-1093

EPA Est.

SCP 1093

4 ounces

1 pound

6 pounds

Net Weight

	FIRST AID			
If on skin or	Take off contaminated clothing.			
clothing	Rinse skin immediately with plenty of water for 15-20 minutes.			
	Call a poison control center or doctor for treatment advice.			
If in eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes.			
	Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.			
	Call a poison control center or doctor for treatment advice.			
Have the produc	t container or label with you when calling a poison control center or			
doctor, or going f	doctor, or going for treatment.			
HOT LINE NUMBER				
For 24-Hour Medical Emergency Assistance (Human or Animal) or				
Chemical Emergency Assistance (Spill, Leak, Fire, or Accident),				
Call				
	1-800-888-8372			

#### PRECAUTIONARY STATEMENTS

### **Hazards to Humans and Domestic Animals**

## **CAUTION**

HARMFUL IF ABSORBED THROUGH SKIN. CAUSES MODERATE EYE IRRITATION. Avoid contact with skin, eyes 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 (PPE)**

## **Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber
- Shoes plus socks

## **User Safety Requirements**

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

## **Engineering Controls**

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.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

## **User Safety Recommendations**

### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
   Wash thoroughly with soap and water after handling.
- Remove clothing/PPE 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 freshwater and estuarine/marine fish and aquatic invertebrates. Azoxystrobin can be persistent for several months or longer. 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 and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water or rinsate.

## **Groundwater Advisory**

Azoxystrobin and a degradate of azoxystrobin are known to leach through soil to groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

## **Surface Water Advisory**

This product may impact surface water quality due to run-off of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having a high potential for reaching surface water via run-off for several months or more after application. 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 loading of azoxystrobin and a degradate of azoxystrobin from run-off water and sediment. Run-off of this product also will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

Notify state and/or Federal authorities and Syngenta immediately if you observe any adverse environmental effects due to use of this product.

### 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 the 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.

#### **DIRECTIONS FOR USE**

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

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

## AGRICULTURAL USES

Use to prevent and control diseases of: turf produced on sod farms; and ornamentals, fruit and nut trees, and vegetable and herb plants grown for transplanting.

#### 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), notification to workers, 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 4 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 such as polyvinyl chloride, nitrile rubber or butyl rubber
- Shoes plus socks

#### NON-AGRICULTURAL USES

Use to prevent and control diseases of turf and ornamentals on golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

#### 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. The area being treated must be vacated by unprotected persons.

Do not treat areas while unprotected humans or domestic animals are present in the treatment areas. Because certain states may require more restrictive reentry intervals, consult your State Department of Agriculture for further information.

Do not allow entry into treatment area until area that was treated with Heritage Fungicide is dry.

#### PRODUCT INFORMATION

Heritage Fungicide is a broad-spectrum, systemic fungicide that prevents or controls the listed pathogens that cause foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildews, anthracnose, fairy rings, molds, and rusts of turfgrass, ornamentals, vegetables and herbs. Heritage Fungicide may be applied in alternating application programs or in tank mixes with other registered plant protection products. All applications must be made according to the use directions that follow.

Heritage Fungicide is a member of Syngenta's Plant Performance™ product line that can improve plant vigor and quality. The additional benefits are due to positive effects on plant physiology, which can vary according to plant species and growing environment.

### **USE PRECAUTIONS AND RESTRICTIONS**

**Adjuvants:** When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program is recommended.

**DO NOT** apply more than 10 lb of Heritage Fungicide (5 lb ai) per acre per year to crops

grown outdoors.

**DO NOT** apply more than 1.1 lb of Heritage Fungicide (0.55 lb ai) per acre per application.

**DO NOT** graze or feed clippings from treated turf areas to animals.

#### **PHYTOTOXICITY**

Heritage Fungicide is highly phytotoxic to apple and certain crabapple and flowering cherry varieties. Use caution to prevent injury to these trees. **DO NOT** use spray equipment that has been used to apply Heritage Fungicide to spray apple, crabapple and flowering cherry trees. Even trace amounts can cause unacceptable phytotoxicity.

#### SPRAY DRIFT MANAGEMENT

**DO NOT** apply Heritage Fungicide when conditions favor drift beyond the area intended for application. Conditions that can contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle and pressure combinations, and spray droplet size. Contact your State extension agent for spray drift prevention guidelines in your area.

**DO NOT** apply Heritage Fungicide where spray drift may reach apple, crabapple or flowering cherry trees.

**DO NOT** apply when weather conditions favor drift from treated areas to a non-target aquatic habitat.

#### AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

## INTEGRATED PEST (DISEASE) MANAGEMENT (IPM)

Heritage Fungicide should be integrated into an overall disease and pest management strategy whenever the use of a fungicide is required. Cultural practices known to reduce disease development, such as planting of resistant cultivars, removal of plant debris to reduce inoculum and water management, should be followed. The following sections in this label identify specific IPM recommendations for each crop. Consult your local agricultural, turf and ornamental authorities for additional IPM strategies established for your area. Heritage Fungicide may be used in State Agricultural Extension advisory (disease forecasting) programs that recommend application timing based on environmental factors favorable for disease development.

#### RESISTANCE MANAGEMENT

## GROUP 11 FUNGICIDE

Some plant pathogens have been shown to develop resistance to fungicide products used repeatedly for their control. Heritage Fungicide should be applied at full label-use rates and in a tank mix or a rotation with other registered fungicides that have a different mode of action. As Heritage Fungicide is a strobilurin (Group 11) fungicide, **DO NOT** alternate with other strobilurins, such as pyraclostrobin and trifloxystrobin. **DO NOT** alternate or tank mix Heritage Fungicide with fungicides to which resistance has already developed. Since pathogens differ in their potential to develop fungicide resistance, use the resistance management strategies for each disease given in the **SPECIFIC USE DIRECTIONS** section in this label.

Syngenta Crop Protection encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label. Consult your local or state Extension Service for resistance management strategies that are complementary to those in this label.

#### MIXING INSTRUCTIONS

To prepare spray solution, partially fill the spray tank with clean water and begin agitation. Add the specified amount of Heritage Fungicide to the tank, allowing adequate time for good mixing. Add an adjuvant if recommended. Finish filling the tank to the desired volume to obtain the proper spray concentration. Maintain agitation throughout the spraying operation. **DO NOT** allow spray mixture to stand overnight or for prolonged periods. Mix only the amount of spray required for your immediate use. Sprayers should be thoroughly cleaned immediately after application.

Heritage Fungicide is compatible with commonly used fungicides, liquid fertilizers, herbicides, insecticides and biological control products. If tank mixes are desired, products should be added to the spray tank in the following order: Heritage Fungicide, other WG or dry flowable formulations, wettable powders and flowable (aqueous suspensions) products. Observe all directions, precautions, and limitations on labeling of all products used. Consult compatibility charts or your local or state agricultural or turf authorities for compatibility information.

**DO NOT** mix Heritage Fungicide in the spray tank with pesticides, surfactants or fertilizers unless compatibility charts or your own prior use has shown that the combination is physically compatible, effective and non-injurious under your conditions of use. If physical compatibility is unknown, the following procedure should be followed: Pour the recommended proportions of the products into a suitable container of water, mix thoroughly and allow it to stand at least 20 minutes. If the combination remains mixed or can be re-mixed readily, the mixture is considered physically compatible.

Heritage Fungicide is incompatible with many fertilizers when low water volumes are used for in-furrow applications. Cold temperatures and water quality exacerbate these compatibility problems. Conduct a physical compatibility test as described in the paragraph as above before making a field application.

**NOTE:** Heritage Fungicide has demonstrated some phytotoxic effects when mixed with products that are formulated as EC's. These effects are enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, silicone-containing adjuvants have also contributed to phytotoxicity.

### **APPLICATION INSTRUCTIONS**

Heritage Fungicide should be applied prior to disease development at the rates and timings given in this label. Apply at the higher rates in the rate range and/or shorter spray intervals under conditions of heavy infection pressure, on highly susceptible varieties or when environmental conditions are conducive for disease development. Use of Heritage Fungicide as a "rescue" (late curative or eradicant) treatment may not give satisfactory disease control.

Heritage Fungicide may be applied with various types of spray equipment commonly used for making ground and aerial applications. For ground applications, apply Heritage Fungicide in a volume of water sufficient to provide good plant canopy penetration. For aerial applications, apply Heritage Fungicide in a minimum of two gallons of water per acre. Ground application is preferred as it typically provides better canopy penetration and coverage.

Proper adjustments and calibration of spraying equipment are essential for optimal disease control. If you have questions about calibration, contact a State Extension Service specialist, the equipment manufacturer or other experts.

## **Directions for Use through Sprinkler and Drip Chemigation Systems**

**Spray Preparation:** Chemical tank and injector system should be thoroughly cleaned. Flush system with clean water.

#### **Use Precautions for Sprinkler and Drip Irrigation Applications:**

**Drip and Micro Irrigation:** Heritage Fungicide may be applied through drip and micro irrigation systems to potted ornamentals or to bedded, field-grown ornamentals for soilborne disease control. The soil or potting media should have adequate moisture capacity prior to drip application.

Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, subsequent irrigation (water only) should be delayed for at least for 24 hours following drip application.

**Sprinkler Irrigation:** Apply this product through sprinkler irrigation systems including center pivot, motorized boom, lateral move, end tow, side [wheel] roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system except as specified on this label.

Apply with center-pivot or continuous-move equipment distributing ½ acre-inch or less during treatment. In general, use the least amount of water required for proper distribution and coverage. If stationary systems (solid set, handlines or wheel lines other than continuous-move) are used, this product should be injected into no more than the last 20-30 minutes of the set. **DO NOT** apply when winds are greater than 10-15 mph to avoid drift or wind skips. Plant injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform treated water. Thorough coverage of foliage is required for good control. Good agitation should be maintained during the entire application period.

If you have questions about calibration, contact the State Extension Service specialist, 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 watersource contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quickclosing 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 interlocking 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.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. 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.

**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.

## **Specific Instructions for Public Water Systems**

- 1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There must be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. Do not apply when wind speed favors drift beyond the area intended for treatment.

#### **DIRECTIONS FOR TURF**

Heritage Fungicide is recommended for control of the listed pathogens that cause foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildew, molds and rusts of turfgrass. Heritage Fungicide may be used on golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas, athletic fields and sod farms.

## **Integrated Pest (Disease) Management (IPM)**

Sound turf management resulting in healthy, vigorous turf is the foundation of a good IPM program. Cultural practices, such as proper choice of turf variety, nutrient management, proper cutting height, thatch management, and proper watering, drainage, and moisture stress management, should be integrated with the use of fungicides to increase turf vigor and reduce the susceptibility to disease. Immunoassay detection kits and extension service diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

## **Resistance Management**

**DO NOT** spray more than two sequential Heritage Fungicide applications for Gray Leaf Spot or *Pythium* spp. control. For all other diseases when Gray Leaf Spot and *Pythium* spp. are not present, **DO NOT** spray more than three sequential applications of Heritage Fungicide.

## **Application Directions**

Heritage Fungicide should be applied prior to disease development. Mix Heritage Fungicide with the required amount of water and apply as a dilute spray in 2-4 gallons of water per 1,000 square feet (87-174 gallons per acre). Repeat applications at specified intervals. For spot treatments, use 0.2 oz of Heritage Fungicide per 1-2 gallons of water.

**DO NOT** apply to golf course turf by air.

### **Soil Injection Application**

Heritage Fungicide may be applied through a liquid fungicide injector for the control of ectrotrophic root diseases such as summer patch and take-all patch. Use Heritage Fungicide only in liquid injection equipment specifically designated for pesticide use.

Apply Heritage Fungicide at 0.2 to 0.4 oz per 1,000 sq ft. Spray carrier volume should fall within 30-150 gallons of water per 1,000 sq ft. Injection hole spacing of 1 inch by 1 inch is recommended for optimum control. Do not exceed injection depth of 2 inches.

One-inch depth is recommended for optimum results. Application timing should follow disease control strategies used for normal broadcast spray programs.

# Application when Establishing Turfgrass from Seed or in Overseeding of Dormant Turfgrass

Heritage Fungicide may be used for control of certain turfgrass diseases associated with turfgrass establishment from seed or during overseeding of dormant turfgrass. Heritage Fungicide may be safely applied before or after seeding or at seedling germination and emergence to ryegrass, bentgrass, bluegrass (including *Poa trivialis*), and fescue turfgrass types. Optimum application timing is during seeding. See **Application Directions** section.

<u>Dollar Spot</u>: Heritage Fungicide does not control Dollar Spot. During periods of Dollar Spot pressure, always mix Heritage Fungicide with Daconil<sup>®</sup>, Banner Maxx®, Secure® or other Dollar Spot control fungicide. Heritage Fungicide is compatible in tank mixes with many other fungicides that control Dollar Spot. Follow directions under **MIXING INSTRUCTIONS** above.

**TABLE 1: Directions for Application for Turf Diseases** 

Target Diseases	Use Rate (oz product/ 1,000 sq ft)	Application Interval (days)	Remarks*
Anthracnose (Colletotrichum cereale)	0.2-0.4	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Bermudagrass Decline (Gaeumannomyces graminis	0.4	28	Use preventatively. Begin applications when conditions are favorable for disease infection prior to disease symptom development.
Brown Patch (Rhizoctonia solani)	0.2-0.4	14-28	Apply when conditions are favorable for disease development.
Brown Ring Patch ( <i>Waitea circinata</i> )	0.2-0.4	14-28	Apply when conditions are favorable for disease development
Cool Weather Brown Patch Yellow Patch (Rhizoctonia cerealis)	0.2-0.4	14-28	Make one or two applications in fall or when conditions are favorable for disease development.
Fairy Ring (Lycoperdon spp., Agrocybe pediades, Arachnion spp., Bovista spp., and Vascellum spp.)	0.4	28	Apply preventatively or as soon as possible after fairy ring symptoms develop. Add the recommended rate of a wetting agent to the final spray and water in immediately with 1/8 to 1/4 inches of irrigation. Fairy ring symptoms may take 2 to 3 weeks to disappear following curative application. Reapplication after 28 days may be required in some cases. Severely damaged or thin turf may require reseeding

Fusarium Patch ( <i>Microdochium nivale</i> )	0.2-0.4	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Gray Leaf Spot (Pyricularia grisea)	0.2-0.4	14-28	Begin applications before disease is present and continue applications while conditions are favorable for disease development.
Gray Snow Mold Typhula blight (Typhula incarnata, T. ishikariensis)	0.4	10-28	Make two applications of 0.4 oz spaced 10-28 days apart in late fall just before snow cover. Tank mixing with another snow mold fungicide, such as Daconil, may enhance control under severe disease pressure.
Leaf and Sheath Spot (Rhizoctonia zeae)	0.4	14-28	Apply when disease conditions are favorable for disease development.
Leaf Rust, Stem Rust, Stripe Rust (Puccinia spp.)	0.2-0.4	14 to 28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Leaf Spot ( <i>Bipolari</i> s spp.)	0.2-0.4	14-21	Apply when conditions are favorable for disease development.
Melting Out (Drechslera poae)	0.2-0.4	14-21	Apply when conditions are favorable for disease development.
Necrotic Ring Spot (Leptosphaeria korrae)	0.2-0.4	14-28	Apply when conditions are favorable for disease development.
Pink Patch (Limonomyses roseipellis)	0.2-0.4	14-28	Apply when conditions are favorable for disease development.
Pink Snow Mold (Microdochium nivale)	0.4	10-28	Make two applications of 0.4 oz spaced 10-28 days apart in late fall just before snow cover. Tank mixing with another snow mold fungicide, such as Daconil, may enhance control under severe disease pressure.
Powdery Mildew (Erysiphe graminis)	0.2-0.4	14-28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Pythium Blight Pythium Root Rot (Pythium aphanidermatum, Pythium spp.)	0.2-0.4	10-14	Use preventatively. Begin applications before disease is present. During periods of prolonged favorable conditions, treat on the 10-day application interval. For use on newly seeded as well as established turf.
Pythium Root Dysfunction ( <i>Pythium volutum</i> )	0.4	21-28	Apply preventatively when mean daily soil temperatures are between 55 F and 70 F. Irrigate with 0.1 to 0.2 inches within 24 hours after application to facilitate movement into the root zone.
Red Thread (Laetisaria fuciformis)	0.2-0.4	14-28	Apply when conditions are favorable for disease development.
Rhizoctonia Large Patch (Rhizoctonia solani)	0.2-0.4	14-28	Make one or two applications in fall or when conditions are favorable for disease development. Spring applications may also be required in some locations or when disease pressure is high.

Southern Blight (Sclerotium rolfsii)	0.2-0.4	14-28	Apply when conditions are favorable for disease development.
Summer Patch (Magnaporthe poae)	0.2-0.4	14-28	Apply when conditions are favorable for disease development.
Take-all patch (Gaeumannomyces graminis)	0.2-0.4	28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development. Make two applications 28 days apart in the spring and two applications 28 days apart in the fall.
Zoysia Patch (Rhizoctonia solani, Gaeumannomyces incrustans)	0.2-0.4	14-28	Apply 1 or 2 applications approximately one month prior to zoyia grass dormancy. Reapply 14 to 28 days later.

<sup>\*</sup>Do not apply more than two sequential applications of Heritage Fungicide for control of Gray Leaf Spot and *Pythium* spp. For all other diseases when Gray Leaf Spot and *Pythium* spp. are not present, do not apply more than three sequential applications of Heritage Fungicide.

**TABLE 2: Heritage Fungicide Rate Conversion Chart for Turf** 

Oz Product/ 1,000 sq ft	Oz Al/ 1,000 sq ft	Oz Product/ Acre	Pound Product/ Acre
0.20	0.10	8.7	0.5
0.30	0.15	13.1	0.8
0.40	0.20	17.4	1.1

TABLE 3: Amount of Heritage Fungicide to Mix 100 Gallons for Turf Applications

	Spray Volume (gallons/1,000 sq ft)		
Heritage Fungicide Use Rate	2.0 gallons	3.0 gallons	4.0 gallons
0.20 oz	10 oz	6.7 oz	5 oz
0.40 oz	20 oz	13.3 oz	10 oz

#### **DIRECTIONS FOR ORNAMENTALS**

Heritage Fungicide is recommended for control of listed pathogens that cause foliar, aerial, and root diseases, including: leaf, tip, and flower blights; leaf spots; downy mildew; powdery mildew; anthracnose; and rusts of ornamental plants. Heritage Fungicide may be used to control certain diseases of container, bench, flat, plug, bed or field-grown ornamentals in greenhouses, shade and lath houses, outdoor nurseries, retail nurseries, interiorscapes and other landscape areas.

## **Integrated Pest (Disease) Management (IPM)**

Heritage Fungicide should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant debris management and proper timing and placement of irrigation. Immunoassay detection kits and diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

## **Resistance Management**

**DO NOT** make more than three (3) sequential applications of Heritage Fungicide before alternating with a fungicide of a different mode of action. A sound resistance management program would include blocks of three Heritage Fungicide applications separated by blocks of two alternate fungicide applications. **DO NOT** alternate Heritage Fungicide with other strobilurin fungicides.

## **Application Directions**

Apply Heritage Fungicide as a foliar or soil broadcast, drench, or banded spray targeted at the foliage or crown of the plant. Apply to the point of runoff to ensure complete coverage of the target plant. Good coverage and wetting of foliage is necessary for best control. Refer to the label for specific use directions for control of certain diseases. Repeat applications at specified intervals using an appropriate resistance management program.

Apply Heritage Fungicide at listed use rates. The addition of an adjuvant at the recommended use rate may enhance coverage on hard-to-wet plant foliage. Under light to moderate disease pressure, use the lower listed rates and shorter listed application interval. Under environmental conditions conducive to severe disease development, use the higher rates and shorter listed application interval. Use of Heritage Fungicide as a "rescue" (late curative or eradicant) treatment may not result in satisfactory disease control.

**DO NOT** exceed 600 gallons spray volume per acre for foliar applications.

**DO NOT** apply greater than 2 pints of solution per square foot for drench and crown applications.

**DO NOT** tank-mix Heritage Fungicide with other fungicides, insecticides, herbicides, fertilizers, or adjuvants unless local experience indicates that the tank mix will not injure ornamental plants.

## **Drench Application**

Heritage Fungicide may be applied to control soilborne, seedling, and crown diseases of ornamentals as a preventative drench treatment prior to infection. Good coverage of the pre-infection area (root zone, root ball, and crown) is necessary for satisfactory control. Heritage Fungicide may be applied by drench to container-grown ornamentals. Make a drench application prior to infection as healthy roots are necessary to optimize product uptake and systemic translocation to optimize disease protection. Due to the systemic activity of Heritage Fungicide, suppression of certain foliar diseases has been observed in plants treated with drench applications.

Use caution before applying Heritage Fungicide as a drench to small bedding plants in the seedling/plug stage due to possible phytotoxicity. A limited quantity of plants should be tested prior to full-scale application.

## **Chemigation: Use through Sprinkler and Drip Irrigation Systems**

Heritage Fungicide may be applied through sprinkler, drip or other micro irrigation systems to potted ornamentals or to bedded, field-grown ornamentals for soil-borne disease control. Apply Heritage Fungicide as a preventative treatment. The soil or potting media should have adequate moisture capacity prior to drip application.

Terminate irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, subsequent irrigation (water only) should be delayed for at least for 24 hours following application.

#### **Use Restrictions and Precautions**

**DO NOT** apply Heritage Fungicide to apple or cherry trees (including flowering and ornamental varieties, such as Yoshino) due to possible phytotoxicity. **DO NOT** use spray equipment that has applied Heritage Fungicide for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer.

Application of Heritage Fungicide to crabapple may cause phytotoxicity. Heritage Fungicide may be applied to specific tolerant varieties of crabapple. Heritage Fungicide has been shown to be safer when applied to the species and varieties listed in **Table 12.** Due to the large number of species, and varieties of crabapple, it is impossible to test every one for tolerance to Heritage Fungicide. The user should conduct small-scale testing to ensure plant safety prior to large-scale commercial use on plant species and varieties not listed on this label.

When used in accordance with the label directions, Heritage Fungicide will provide control of the diseases of ornamental plants in the following table.

### **TABLE 4: Foliar Plant Diseases Controlled**

(Heritage Fungicide is sold in several product container sizes. For product container sizes of 8 oz and larger, follow the mixing instructions in the second column. For the 4 oz product container size, follow the mixing instructions in the third column in the following table.)

	Mixing Instructions, Use Rates and Remarks			
DISEASE (Pathogen)	8 oz and larger product container sizes (oz product per 100 gallons)	4 oz product container size (oz product per 50 gallons)		
CONIFER BLIGHTS				
Phomopsis Blight (Phomopsis juniperovora)	Apply 1-4 oz every 7-28 days.	Apply 0.5-2 oz every 7-28 days.		
Tip Blight (Sirococcus strobilinus)	Apply 1-4 oz every 7-28 days.	Apply 0.5-2 oz every 7-28 days.		
LEAF BLIGHTS/LEAF SPOT	S			
Alternaria Leaf Spot (Alternaria spp.)	Apply 1-8 oz every 7-28 days.	Apply 0.5-4 oz every 7-28 days.		
Anthracnose (Colletotrichum spp., Elsinoe spp.)	Apply 1-8 oz every 7-28 days.	Apply 0.5-4 oz every 7-28 days.		
Cercospora Leaf Spot (Cersospora spp.)	Apply 1-4 oz every 7-28 days.	Apply 0.5-2 oz every 7-28 days.		
Cylindrocladium leaf spot/stem canker (Cylindrocladium spp.)	Apply 4-8 oz every 7-14 days.	Apply 2-4 oz every 7-14 days.		
Downy Mildew (including Peronospora spp., Plasmopara spp., Bremiella spp., Bremia spp.)	Apply 2-4 oz every 7-21 days during periods of active plant growth and prior to dormancy or severe infection. Use lower use rates for herbaceous seedlings	Apply 1-2 oz every 7-21 days during periods of active plant growth and prior to dormancy or severe infection.		
Entomosporium Leaf Spot (Entomosporium spp.)	Apply 1-4 oz every 7-28 days.	Apply 0.5-2 oz every 7-28 days.		
Iris Leaf Spot (Mycosphaerella spp.)	Apply 2-4 oz every 7-21 days.	Apply 1-2 oz every 7-21 days.		
Leaf spot (Cladosporium spp.)	Apply 1-4 oz every 7-28 days.	Apply 0.5-2 oz every 7-28 days.		

	Mixing Instructions, Use Rates and Remarks			
DISEASE (Pathogen)	8 oz and larger product container sizes (oz product per 100 gallons)	4 oz product container size (oz product per 50 gallons)		
Rose Blackspot ( <i>Diplocarpon rosea</i> )	Apply 4-8 oz every 7-14 days. Under severe disease conditions or if disease is already present, Heritage Fungicide should be applied at the highest listed rate and shortest application interval. Heritage Fungicide may be tank-mixed with another rose blackspot fungicide. Do not exceed 24 oz/A per application.	Apply 2-4 oz every 7-14 days. Under severe disease conditions or if disease is already present, Heritage Fungicide should be applied at the highest listed rate and shortest application interval. Heritage Fungicide may be tank-mixed with another rose blackspot fungicide. Do not exceed 24 oz/A per application.		
Myrothecium leaf spot (Myrothecium spp.)	Apply 2-4 oz every 7-21 days.	Apply 1-2 oz every 7-21 days.		
Scab (Venturia inaequalis, Sphaceloma poinsettiae, Elsinöe australis)	Apply 1-4 oz every 10-28 days. Do not apply to apple trees. For crabapples, see <b>Table 12</b> for tolerant varieties.	Apply 0.5-2 oz every 10-28 days. Do not apply to apple trees. For crabapples, see Table 12 for tolerant varieties.		
Marssonina Leaf Spot (Marssonina spp.)	Apply 1-4 oz every 14-28 days.	Apply 0.5-2 oz every 14-28 days.		
POWDERY MILDEW				
Erysiphe spp., Microsphaera spp., Sphaerotheca spp., Oidium spp., Podosphaera spp., Uncinula spp.	Apply 1-4 oz every 7-28 days. Do not make more than 2 sequential applications before rotating to another class of fungicide.	Apply 0.5-2 oz every 7-28 days. Do not make more than 2 sequential applications before rotating to another class of fungicide.		
RUSTS				
Needle Rust (Melampsora occidentalis)	Apply 1-4 oz every 7-28 days.	Apply 0.5-2 oz every 7-28 days.		
Other Rusts (Phragmidium spp., Puccinia spp., Gymnosporagium spp., Coleosporium spp., Uromyces spp.)	Apply 1-4 oz every 7-28 days.	Apply 0.5-2 oz every 7-28 days.		
FLOWER BLIGHTS				
Anthracnose (Collectotrichum spp., Elsinoe spp.)	Apply 1-4 oz every 7-28 days.	Apply 0.5-2 oz every 7-28 days.		
Botrytis Blight (Botrytis cinerea)	Apply 4-8 oz every 7-21 days. For suppression only. Do not exceed 24 oz/acre.	Apply 2-4 oz every 7-21 days. For suppression only. Do not exceed 24 oz/acre.		

	Mixing Instructions, Use Rates and Remarks			
DISEASE (Pathogen)	8 oz and larger product container sizes 4 oz product container size (oz product per 100 gallons) (oz product per 50 gallons)			
SHOOT/STEM DISEASES				
Aerial/Shoot Blight (Phytophthora spp.)	Apply 1-4 oz every 7-28 days.	Apply 0.5-2 oz every 7-28 days.		

## **TABLE 5: Soilborne Diseases Controlled – Directed Spray**

	Mixing Instructions, Use Rates and Remarks		
	8 oz and larger product		
	container sizes	4 oz product container size	
Pathogen	(oz product per 100 gallons)	(oz product per 50 gallons)	
Fusarium spp. Rhizoctonia solani Sclerotium rolfsii Sclerotinia spp.	Apply 1-4 oz every 7-21 days.	Apply 0.5-2 oz every 7-21 days.	

TABLE 6: Soilborne Diseases Controlled – Drench and Drip Irrigation See Drench Application section of ORNAMENTAL DIRECTIONS FOR USE for additional drench directions.

Pathogen	Use Rate (oz product/100 gallons)	Remarks
Fusarium spp. Rhizoctonia solani Sclerotium rolfsii	0.2-1.0 oz	Apply 1-2 pints of the solution per square foot surface area every 7-28 days.
Sclerotinia spp.	1.0 oz	Apply 1-2 pints of the solution per square foot surface area every 7-28 days. Apply for control of Sclerotinia by drench application only.

**TABLE 7. Soilborne Diseases Controlled – Banded Applications** 

Pathogen	Use Rate (oz product/1,000 row feet)	Remarks
Fusarium spp. Rhizoctonia solani Sclerotium rolfsii Sclerotinia spp.	0.2-0.4 <sup>1</sup> oz	Apply as a banded spray, 7 inches or less in width, directed to the soil using single or multiple spray nozzles adjusted to provide thorough coverage of lower stems <sup>2</sup> and the soil surface.

When applications are applied to crops grown using 22-inch row spacing, the maximum application rate is 0.35 oz/1,000 row feet.

**TABLE 8. Soilborne Diseases Controlled – In-furrow Application** 

Pathogen	Use Rate (oz product/1,000 row feet)	Remarks
Fusarium spp. Rhizoctonia solani Sclerotium rolfsii	0.2-0.3 oz <sup>1</sup>	Mount the spray nozzle to allow the spray mixture to be applied directly into the furrow and before the propagated unit (seed, seed pieces, bulbs or corms) are covered by soil. Apply the higher
Suppression Only: Pythium spp.		listed rate when current or expected weather conditions are conducive for disease development.

<sup>&</sup>lt;sup>1</sup>Apply product in 3 to 15 gallons of water per 1,000 row feet.

TABLE 9: Soilborne Diseases Controlled – Broadcast Application

Pathogen	Use Rate (oz product/A)	Remarks
Fusarium spp. Rhizoctonia solani Sclerotium rolfsii Sclerotinia spp.	2-16 oz	Apply as a preventative broadcast application. Soil or potting media should have adequate moisture capacity prior to application if applied by overhead irrigation.

<sup>&</sup>lt;sup>2</sup>Applications that come into contact with the foliage are considered foliar applications for resistance management.

TABLE 10: Foliar and Soil Diseases Suppressed – Drench and Drip Applications

Disease/Pathogen	Use Rate (oz product/100 gallons)	Remarks
Rusts Powdery Mildew <i>Pythium</i> spp.	0.45-1.0 oz	Apply 1-2 pints of the solution per square foot surface area every 7-28 days.

## **Plant Safety**

Heritage Fungicide has been shown to be safe when applied to the ornamental plants listed in **Tables 11 and 12** when applied according to listed application methods, rates, and timings. Due to the large number of species and varieties of ornamental and nursery plants, it is impossible to test every one for tolerance to Heritage Fungicide. Neither the manufacturer nor the seller has determined whether or not Heritage Fungicide can be used safely on ornamental and nursery plants not specified on this label. The user should conduct small-scale testing to ensure plant safety prior to large-scale commercial use on varieties not listed on this label.

**DO NOT** tank-mix Heritage Fungicide with other fungicides, insecticides, herbicides, fertilizers, or adjuvants unless local experience indicates that the tank mix is safe to ornamental plants.

**DO NOT** apply Heritage Fungicide to certain crabapple or cherry trees (including flowering or ornamental varieties, such as Yoshino) due to possible phytotoxicity (see **Table 13** for complete list). **DO NOT** use spray equipment that has been used to apply Heritage Fungicide for use in these sensitive crops due to possible phytotoxicity.

**TABLE 11: Tolerant Plants Listed by Common Name:** 

COMMON NAME	BOTANICAL NAME		
Abelia	Abelia spp.		
Andromeda, Japanese	Pieris japonica		
Arborvitae	Thujopsis spp.		
Aspen Trees	Populus spp.		
Aster	Aster spp.		
Aucuba, Japanese	Aucuba japonica		
Azalea, Glacier	Rhododendron spp.		
Azaleas	Rhododendron spp.		
Balsam	Impatiens spp.		
Barberry	Berberis thunbergii		
Begonia (except Rieger begonia)	Begonia spp.		
Birch, River	Betula nigra		
Black-Eyed Susan	Rudbeckia hirta		

COMMON NAME	BOTANICAL NAME
Blanket Flower	Gaillardia spp.
Bougainvillea	Bougainvillea spp.
Boxwood	Buxus sempervirens
Buddleia	Buddleia davidii
Bugle	Ajuga reptans
Bugleweed	Ajuga reptans
Burning Bush	Euonymus alatus
Butterfly Bush	Buddleia davidii
Cactus, Holiday	Schlumbergera
Caladium	Caladium spp.
Camellia	Camellia japonica
Carnation	Dianthus caryophyllus
Ceanothus	Ceanothus spp.
Cedar, Atlas	Cedrus atlantica
Cedar, Red	Juniperus virginiana
Cedar, Western Red	Thuja plicata
Cedar, White	Cedrus spp.
Christmas Trees	See Fir, Douglas; Fir, Fraser; and Pine, Scotch
Chrysanthemum	Chrysanthemum spp.
Cinquefoil	Potentilla spp.
Clethra	Clethra alnifolia
Coleus	Plectranthus spp.
Cotoneaster, Creeping	Cotoneaster adpressus
Cotoneaster, Variegated Rockspray	Cotoneaster horizontalis
Crabapple (See <b>Table 12</b> for variety list)	Malus spp.
Cranesbill	Geranium spp.
Crapemyrtle	Lagerstroemia indica
Cyclamen	Cyclamen spp.
Cyperus	Cyperus spp.
Cypress, Sawara	Chamaecyparis pisifera
Cypress, Leyland	Chamaecyparis spp.
Daisy, Gerber	Gerbera jamesonii
Daisy, Transvaal	Gerbera jamesonii
Dogwood	Cornus spp.
Dogwood	Cornus florida
Dogwood, Pink	Cornus spp.
Dumb-Cane	Dieffenbachia spp.
Euonymus, Dwarf Winged	Euonymus alata
Euonymus, Evergreen	Euonymus japonicus
Evergreen, Chinese	Aglaonema spp.

COMMON NAME	BOTANICAL NAME
Fatsia, Japanese	Fatsia japonica
Fig	Ficus spp.
Fir, Douglas	Pseudotsuga spp.
Fir, Fraser	Abies fraseri
Fir, Noble	Abies procera
Floss Flower	Ageratum spp.
Forsythia	Forsythia viridissima
Foxglove	Digitalis spp.
Gardenia	Gardenia jasminoides
Geranium	Pelargonium spp.
Grass	Pennisetum alopecuroides
Grass, Dwarf Pampas	Phalaris spp.
Grass, Pampas	Cortaderia selloana
Hawthorn, Indian	Rhaphiolepsis indica
Heather	Erica dareyensis
Hemlock	Tsuga spp.
Hemlock, Western	Tsuga heterophylla
Hibiscus	Hibiscus moscheutos
Hibiscus	Hibiscus rosa-sinensis
Holly	llex spp.
Hosta	Hosta spp.
House Leek	Sempervivum spp.
Hydrangea	Hydrangea spp.
Hydrangea, French	Hydrangea macrophylla
Impatiens <sup>1,2</sup>	Impatiens spp. <sup>1,2</sup>
Iris (Bulbous, Spanish, Dutch)	Iris xiphium
Iris, African	Dietes iridiodes
Iris, Butterfly	Dietes iridiodes
Ivy, Algerian	Hedera algeriensis
Ivy, English	Hedera helix
Ivy, Swedish	Plectranthus spp.
Japanese Pittosporum	Pittosporum tobira
Juniper	Juniperus procumbens
Juniper	Juniperus scopulorum
Juniper	Juniperus spp.
Larkspur	Delphinium spp.
Laurel	Laurus nobilis
Laurel, Australian	Pittosporum spp.
Laurel, Japanese	Aucuba japonica
Lilac, California	Ceanothus spp.
Lilac, Wild	Ceanothus sanguineus

COMMON NAME	BOTANICAL NAME	
Lily, Asiatic	Lilium spp.	
Lily, Peace	Spathiphyllum floribundium	
Lily-Turf	Liriope muscari	
Live-Forever	Sempervivum spp.	
Magnolia	Magnolia spp.	
Magnolia, Saucer	Magnolia soulangiana	
Magnolia, Southern	Magnolia grandiflora	
Maple, Japanese	Acer palmatum	
Maple, Sugar	Acer saccharum	
Marigold	Tagetes spp.	
Mugwort	Artemisia spp.	
Nandina	Nandina domestica	
Oak, Pin	Quercus palustris	
Oak, Red	Quercus falcata	
Oleander	Nerium oleander	
Orpine	Sedum spp.	
Palm, Date	Phoenix dactylifera	
Palm, Parlor	Chamaedora elegans	
Palm, Queen	Syagrus romanzoffianum	
Palm, Robellini	Phoenix roebelenii	
Palm, Sago	Caryota urens	
Pansy <sup>1</sup>	Viola spp. <sup>1</sup>	
Paper Plant	Fatsia japonica	
Pear, Bradford's	Pyrus calleryana	
Periwinkle	Vinca spp.	
Petunia <sup>2</sup>	Petunia spp.	
Philodendron	Philodendron spp.	
Phlox	Phlox spp.	
Photinia, Red-Tip	Photinia glabra	
Pine	Pinus spp.	
Pine, Black	Pinus nigra	
Pine, Eastern White	Pinus strobus	
Pine, Mugo	Pinus mugo	
Pine, Scotch	Pinus sylvestris	
Pink	Dianthus spp.	
Plum, Flowering	Prunus spp.	
Plum, Purple-Leaf	Prunus spp.	
Poinsettia	Euphorbia spp.	
Poplar	Populus trichocarpa	
Pothos	Epipremnum spp.	
Primrose	Primula spp.	

COMMON NAME	BOTANICAL NAME
Pussy's Foot	Ageratum spp.
Redbud, Western	Cercis occidentalis
Rhododendron	Rhododendron spp.
Ribbon Grass	Setaria spp.
Rose of Sharon	Hibiscus syriacus
Rose	Rosa spp.
Rose-Bay	Nerium oleander
Rosemary (Prostrate)	Rosmarinus spp.
Rubber Plant, Baby	Peperomia spp.
Rubber Tree	Brassaia actinophylla
Sage	Salvia spp.
Sand cherry	Prunus pumila
Snap-Dragon	Antirrhinum spp.
Snowball	Ceanothus spp.
Spirea	Spirea budalda
Spirea	Spirea japonica
Spruce, Blue	Picea pungens
Spruce, Norway	Picea abies
Spruce, White	Picea glauca
Starwort	Aster spp.
Stonecrop	Sedum spp.
Sweet Alyssum	Lobularia maritima
Thyme, Creeping	Thymus serphyllum
Umbrella Tree	Brassaia actinophylla
Verbena	Verbena spp.
Vervain	Verbena spp.
Viburnum	Viburnum spp.
Vinca	Catharanthus roseus
Viola	Viola spp.
White Alder	Clethora spp.
Weigela, Pink	Weigela florida
Willow, Virginia	Itea virginica
Winterberry	llex spp.
Wormwood	Artemisia spp.
Yaupon	llex spp.
Yew, Spreading	Taxus baccata
Yucca	Yucca spp.
Zebra Plant	Aphelandra spp.
Zinnia	Zinnia spp.

<sup>&</sup>lt;sup>1</sup> Do not exceed 2 oz/100 gallons on these species.

**TABLE 12: Tolerant Varieties of Ornamental Crabapple Species (Genus Malus)** 

Callaway	Golden Raindrops	Mary Potter	Selkirk
Carmine (M. atrosanguinea)	Нора	Molten Lava	Sentinel
Candymint Sargent	Indian Magic	New Centennial	Silver Moon
Christmas Holly	Island	Ormiston Roy	Silverdrift
David	Jackii <i>(M. baccata</i> var. jackii)	Pink Satin	Sinai Fire
Dolgo	Japanese Flowering Crabapple (M. floribunda)	Prairie Maid	Sugar Tyme
Donald Wyman	Katherine	Prairiefire	Van Eseltine
Dorothea	Lancelot	Profusion	White Angel
Doubloons	Louisa	Ralph Shay	Wild crabapple (M. coronaria)
Eleyi	<i>Malus x zumi</i> var. Calocarpa		Winter Gold
Evereste	M. sargentii	Red Jade	
Eyelynn	Manchurian (M. baccata var. mandshurica)	Sargent	

TABLE 13: Plants Sensitive to Heritage Fungicide (Do not apply Heritage Fungicide to these species or varieties.)

COMMON NAME	BOTANICAL NAME	
Crabapple - Flame variety	Malus spp. 'Flame'	
Crabapple – Brandywine variety	Malus spp. 'Brandywine'	
Crabapple – Novamac variety	Malus spp. 'Novamac'	
Cherry, Flowering – Yoshino variety	Prunus x yedoensis	
Leatherleaf Fern and Other Ferns for cut foliage	Rumohra adianformis and other species	
Privet	Ligustrum spp.	

<sup>&</sup>lt;sup>2</sup> Heritage may occasionally cause discoloration of flowers when applied directly to blooms of certain plant species. Not all varieties and colors have been evaluated.

# CONIFERS INCLUDING CHRISTMAS TREES AND COMMERCIAL PRODUCTION ROSES

Heritage Fungicide may be used to control certain diseases on conifers and commercial production roses in indoor and outdoor production and landscape situations. See the **DIRECTIONS FOR ORNAMENTALS** section above for more detailed directions for use in landscape situations.

[On the following Specific Use Directions for Conifer and Commercial Rose Production table, use the oz product/A rate (column 3) for products 8 oz or larger. Use the oz product/0.5 A rate (column 4) for 4 oz products.]

TABLE 14: Specific Use Directions for Conifer and Commercial Rose Production

		Use Rate	Use Rate	
		oz product/A	oz product/0.5 A	
Crop	Target Diseases	(lb ai/A)	(lb ai/A)	Remarks
Conifers including Christmas Trees	Diplodia tip blight (Diplodia pinea)  Lophodermium needlecast (Lophodermium pinastri)  Swiss needlecast (Phaeocrytopus gaumannii)	3.2-8.0 (0.10-0.25)	1.6-4.0 (0.10-0.25)	Integrated Pest (Disease) Management: Heritage Fungicide should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance and removal of plant debris in which inoculum may overwinter.  Resistance Management: Do not apply more than four sequential applications of Heritage Fungicide before alternating with a fungicide that is not in Group 11. Do not make more than eight applications of Heritage Fungicide per acre per year.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout the season at 7- to 21-day intervals following the resistance management guidelines.  Applications may be made
				by ground, air or

Specific Use Restrictions: Do Roses (commercial production)  Rowdery Milde (Peronospo sparsa) Powdery Milde (Spherother pannosa) Rust (Phragmidia mucronatur tuberculatur other Phragmidiu spp.) Septoria Leaf (Septoria ro Alternaria Lea (Alternaria alternata)	o not apply now ora dew ca um m, P. um, and um f Spot osea)	Use Rate oz product/A (Ib ai/A)  more than 4.0 p 1.6-8.0 (0.05-0.25)	Use Rate oz product/0.5 A (Ib ai/A)  counds product/acre/ 0.8-4.0 (0.05-0.25)	Remarks  chemigation. An adjuvant may be added at recommended rates.  year (2.0 lb ai/A).  Integrated Pest (Disease) Management: Heritage Fungicide should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.  Resistance Management:
Specific Use Restrictions: Do Roses (commercial production)  Powdery Milde (Spherother pannosa) Rust (Phragmidia mucronatur tuberculatur other Phragmidiu spp.) Septoria Leaf (Septoria ro Alternaria Lea (Alternaria	o not apply now ora dew ca um m, P. um, and um f Spot osea)	(lb ai/A) more than 4.0 p	(Ib ai/A)  counds product/acre/ 0.8-4.0	chemigation. An adjuvant may be added at recommended rates.  (year (2.0 lb ai/A).  Integrated Pest (Disease) Management: Heritage Fungicide should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.
Roses (commercial production)  Downy Milder (Peronospo sparsa) Powdery Milde (Spherother pannosa) Rust (Phragmidia mucronatur tuberculatur other Phragmidia spp.) Septoria Leaf (Septoria ro Alternaria Lea (Alternaria	dew ca um m, P. m, and im f Spot osea)	1.6-8.0	0.8-4.0	may be added at recommended rates.  /year (2.0 lb ai/A).  Integrated Pest (Disease) Management: Heritage Fungicide should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.
Roses (commercial production)  Downy Milder (Peronospo sparsa) Powdery Milde (Spherother pannosa) Rust (Phragmidia mucronatur tuberculatur other Phragmidia spp.) Septoria Leaf (Septoria ro Alternaria Lea (Alternaria	dew ca um m, P. m, and im f Spot osea)	1.6-8.0	0.8-4.0	Integrated Pest (Disease) Management: Heritage Fungicide should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.
Roses (commercial production)  Downy Milder (Peronospo sparsa) Powdery Milde (Spherother pannosa) Rust (Phragmidia mucronatur tuberculatur other Phragmidia spp.) Septoria Leaf (Septoria ro Alternaria Lea (Alternaria	dew ca um m, P. m, and im f Spot osea)	1.6-8.0	0.8-4.0	Integrated Pest (Disease) Management: Heritage Fungicide should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.
	af Spot			Do not make more than four sequential applications of Heritage Fungicide before alternating with a fungicide that is not in Group 11. Do not make more than eight applications per acre per year.  Application Directions: Heritage Fungicide application should begin prior to disease development and continue throughout the season on 7- to 21-day intervals following the resistance management guidelines.  Applications may be made by ground, air or chemigation. An adjuvant may be added at

Specific Use Restrictions: Do not apply more than 4.0 pounds product/acre/year (2.0 lb ai/A).

### PLANTS GROWN FOR FRUIT AND NUTS

Apply Heritage Fungicide to non-bearing fruit and nut plants grown for transplanting (non-bearing plants that will not produce harvestable fruit or nuts for one year after application).

[On the following Fruit and Nut tables, use the **oz product/A** rate (column 3) for products 8 oz or larger. Use the **oz product/0.5** A rate (column 4) for 4 oz products. Use the **oz product/1,000 sq ft** rate (column 5) for all product sizes.]

**TABLE 15: Specific Use Directions for Almonds** 

Crop	Target Diseases	Use Rate oz product/A (Ib ai/A)	Use Rate oz product/0.5 A (Ib ai/A)	Use Rate oz product/ 1,000 sq ft	Remarks
Almonds	Alternaria leaf and fruit spot (Alternaria alternata) Anthracnose (Colletotrichum acutatum) Leaf Blight (Seimatosporium lichenicola) Leaf rust (Tranzschelia discolor) Scab (Cladosporium carpophilum) Shothole (Wilsonomyces carpophilus)	3.2-8.0 (0.1-0.25)	1.6-4.0 (0.1-0.25)	0.075- 0.18	Resistance Management: Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout the season following the resistance management guidelines. Applications may be made by ground, air (minimum 15 GPA) or chemigation. Heritage Fungicide may be applied by air only at growth stages prior to and including 5 weeks after petal fall. An adjuvant may be added at recommended rates.  For anthracnose, scab and shothole, begin applications prior to disease development and continue at 7- to 14-day intervals throughout the season.
	rown Rot Blossom Blight ( <i>Monilinia laxa</i> , <i>M. fructicola</i> )	6.4 – 8.0 (0.2-0.25)	3.2-4.0 (0.2-0.25)	0.15- 0.18	For blossom blight, begin applications at early bloom and continue through petal fall.

## **Specific Use Restrictions:**

- A use rate of 8 oz product/A is equal to 0.25 lb ai/A. Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.

  Do not apply within 28 days of harvest (28-day PHI).

**TABLE 16: Specific Use Directions for Bananas and Plantains** 

	o. Opecine osc				
			Use Rate	Use	
		Han Data	OZ	Rate	
		Use Rate	product/0.5	OZ	
		OZ	Α	product/	
	<b>-</b> . 5:	product/A	(Ib ai/A)	1,000 sq	
Crop Bananas Plantains	Black Sigatoka (Mycosphaerella fijiensis) Yellow Sigatoka (Mycosphaerella musicola)	(lb ai/A) 2.9-4.3 (0.09- 0.135)	1.45-2.15 (0.09- 0.135)	ft 0.07-0.1	Remarks  Integrated Pest (Disease) Management: Heritage Fungicide should be integrated into an overall disease management strategy that includes canopy management through removal of suckers, proper plant spacing, selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters, and good surface water drainage.  Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease
					development and continue throughout the season every 12- 14 days following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at
					adjuvant may be added at recommended rates.

## Specific Use Restrictions:

- Do not apply more than 1.08 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

TABLE 17: Specific Use Directions for Berries, Bushberry Subgroup

Crop	Target Diseases	Use Rate oz product/A (Ib ai/A)	Use Rate oz product/0.5 A (Ib ai/A)	Use Rate oz product/ 1,000 sq ft	Remarks
Berries Bushberry subgroup  Blueberry Currant Elderberry Gooseberry Huckleberry Lingonberry Juneberry Salal  including all cultivars and/or hybrids of these	Alternaria Leaf Spot and Fruit Rot (Alternaria spp.) Anthracnose fruit rot (Colletotrichum gloeosporoides) Botryosphaeria canker (Botryosphaeria spp.) Mummyberry (Vaccinium spp.) Phomopsis stem canker (Phomopsis vaccinii) Powdery mildew (Sphaerotheca spp.) Septoria blight (Septoria spp.)	3.2-8.0 (0.1-0.25)	1.6-4.0 (0.1-0.25)	0.08- 0.18	Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout the season on a 7- to 14- day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.

## **Specific Use Restrictions:**

- Do not apply more than 0.75 lb ai/A per season of azoxystrobin-containing products. May be applied the day of harvest (0-day PHI).

TABLE 18: Specific Use Directions for Berries, Caneberry Subgroup

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

TABLE 19: Specific Use Directions for Citrus Fruit

				ı	
			Use Rate	Use Rate	
		Use Rate	OSE Kale OZ	OZ	
		OSC Kate OZ	product/0.5	product/	
		product/A	A	1,000 sq	
Crop	Target Diseases	(lb ai/A)	(lb ai/A)	ft	Remarks
Citrus	Albinism	6.4-8.0	3.2-4.0	0.15-	Integrated Pest (Disease)
Fruit	(Alternaria	(0.2-0.25)	(0.2-0.25)	0.18	Management: Heritage
	alternata pv.				Fungicide should be
Calamondin	citri)				integrated into an overall
Citron	Alternaria leaf and				disease management strategy
Grapefruit Kumquat	fruit spot (Alternaria citri)				that includes selection of varieties with disease
Lemon	Cercospora leaf				tolerance, removal of plant
Lime	spot				debris in which inoculum
Mandarin	(Cercospora				overwinters, and proper
Orange	spp.)				timing of irrigation.
(sour and	Diplodia stem-end				
sweet)	rot				Resistance Management:
Pummelo Satsuma	(Diplodia natalensis)				Follow the resistance management guidelines in the
mandarin	Greasy spot				Resistance Management
Tangerine	(Mycosphaerella				section. Do not apply more
· ·	citri)				than two sequential
including all	Melanose				applications of Heritage
cultivars	(Diaporthe citri)				Fungicide or other Group 11
and/or	Penicillium				fungicides before alternation
hybrids of these	Decays Green mold,				with a fungicide that is not in Group 11. Do not make more
uiese	Whisker mold,				than four (4) applications of
	suppression of				Heritage Fungicide or other
	Blue mold				Group 11 fungicide per
	(Penicillium				season.
	spp.)				Application Directions:
	Phomopsis stem- end rot				Application Directions: Heritage Fungicide
	(Phomopsis				applications should begin
	citrii)				prior to disease development
	Post-bloom fruit				and continue throughout the
	drop (PFD)				season on 7- to 21-day
	(Colletotrichum				intervals following the
	acutatum)				resistance management
	Powdery mildew				guidelines. Under conditions that favor severe disease
	(Erysiphe spp.) Scab				epidemics, the higher
	(Elsinoe				application rates should be
	fawcettii)				used. Applications may be
	<u> </u>				made by ground, air or
					chemigation. An adjuvant
					may be added at
					recommended rates. A
					horticultural spray oil should be used to improve control of
					greasy spot.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products. May be applied the day of harvest (0-day PHI).

**TABLE 20: Specific Use Directions for Grapes** 

			lo ioi Giapo		
			Han Data	Use	
		Lico Poto	Use Rate	Rate	
		Use Rate	OZ	OZ	
	Torget	OZ	product/0.5	product/ 1,000 sq	
Cron	Target Diseases	product/A (lb ai/A)	A (Ib ai/A)	ft	Remarks
Crop			2.55-4.0	0.11-	
Grapes	Black rot ( <i>Guignardia</i>	5.1-8.0 (0.16-	(0.16-0.25)	0.11-	Integrated Pest (Disease)  Management: Heritage Fungicide
including	bidwellii)	0.25)	(0.10-0.23)	0.10	should be integrated into an
Muscadines	Downy Mildew				overall disease management
	(Plasmopara viticola)				strategy that includes canopy management through pruning and
	Phomopsis				thinning, proper selection of
	cane and				varieties with disease tolerance,
	leaf spot				proper timing and placement of
	(Phomopsis				irrigation and removal of plant debris in which inoculum
	<i>viticola</i> ) Powdery				overwinters.
	mildew				ever wintere.
	(Uncinula				Resistance Management: Follow
	necator)				the resistance management
	Cumprosion				guidelines in the <b>Resistance Management</b> section. Do not
	Suppression Only:				apply more than two sequential
	Botrytis bunch				foliar applications of Heritage
	rot				Fungicide or other Group 11
	(Botrytis				fungicides before alternating with a
	cinerea)				fungicide that is not in Group 11.
					Application Directions: Heritage
					Fungicide applications should
					begin prior to disease development and continue
					throughout the season every 10-
					14 days following the resistance
					management guidelines.
					Applications may be made by
					ground, air or chemigation. An
					adjuvant may be added at recommended rates.
					reconfinenceu rates.
					ATTENTION
					Heritage Fungicide is extremely
					phytotoxic to certain apple
					varieties. DO NOT spray Heritage Fungicide where spray drift may
					reach apple trees.
					AVOIDING SPRAY DRIFT IS THE
					RESPONSIBILITY OF THE
					APPLICATOR.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products. Do not apply within 14 days of harvest (14-day PHI).

**TABLE 21: Specific Use Directions for Pecans** 

	-		Use Rate	Use Rate	
		Use Rate	oz	oz	
	Target	oz product/A	product/0.5 A	product/ 1,000 sq	
Crop	Diseases	(lb ai/A)	(lb ai/A)	ft	Remarks
Pecans	Anthracnose (Glomerella cingulata) Scab (Cladosporium caryigenum)	3.2-6.4 (0.10- 0.20)	1.6-3.2 (0.10-0.20)	0.08- 0.15	Integrated Pest (Disease) Management: Heritage Fungicide should be integrated into an overall disease management strategy that includes selection of varieties with tolerance to disease and removal of plant debris in which inoculum overwinters.  Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout the season on 7- to 21-day intervals following the resistance management guidelines.  Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.

- Do not apply more than 1.2 lb ai/A per season of azoxystrobin-containing products.
  Do not apply within 45 days of harvest (45-day PHI).

**TABLE 22: Specific Use Directions for Pistachios** 

		Use Rate oz product/A	Use Rate oz product/0.5 A	Use Rate oz product/ 1,000 sq	
Crop	Target Diseases	(lb ai/A)	(Ib ai/A)	ft	Remarks
Pistachios	Alternaria late blight (Alternaria alternata) Botryosphaeria panicle and shoot blight (Botryosphaeria dothidea) Septoria leaf spot (Septoria pistaciarum)	3.2-8.0 (0.10- 0.25)	1.6-4.0 (0.10-0.25)	0.08- 0.18	Integrated Pest (Disease) Management: Heritage Fungicide should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance and removal of plant debris in which inoculum overwinters.  Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout the season on 7- to 21-day intervals following the resistance management guidelines.  Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- Do not apply within 7 days of harvest (7-day PHI).

**TABLE 23: Specific Use Directions for Stone Fruit** 

Crop	Target Diseases	Use Rate oz product/A (Ib ai/A)	Use Rate oz product/0.5 A (Ib ai/A)	Use Rate oz product/ 1,000 sq ft	Remarks	
Stone Fruit  Apricot Cherry, sweet Cherry, tart Nectarine Peach Plum Plumcot Prune	Alternaria spot and fruit rot (Alternaria alternata) Anthracnose (Colletotrichum prunicola, C. gloeosporioides) Leaf rust (Tranzschelia discolor) Powdery mildew (Sphaerotheca pannosa, Podosphaera clandestina) Scab (Cladosporium carpophilum) Shot hole (Wilsonomyces carpophilus)	3.2-8.0 (0.1-0.25)	1.6-4.0 (0.1-0.25)	0.08-0.18	Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: For brown rot blossom blight, begin applications at early bloom and continue through petal fall. For brown rot on fruit, Heritage Fungicide may be applied to fruit up to the day of harvest. For scab, begin applications at petal fall and continue at 7- to 14-day	
	Brown rot blossom blight and fruit rot (Monilinia fructicola, M. laxa)	6.4-8.0 (0.2-0.25)	3.2-4.0 (0.2-0.25)	0.15-0.18		

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

**TABLE 24: Specific Use Directions for Strawberry** 

Crop	Target Diseases	Use Rate oz product/A (Ib ai/A)	Use Rate oz product/0.5 A (Ib ai/A)	Use Rate oz product/ 1,000 sq ft	Remarks
Strawberry	Anthracnose (Colletotrichum fragariae) Powdery mildew (Sphaerotheca macularis)  Suppression only: Botrytis on the foliage (Botrytis cinerea)	3.2-8.0 (0.1-0.25)	1.6-4.0 (0.1-0.25)	0.08-0.18	Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout the season on a 7- to 10-day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.  For dip applications at transplanting for commercial berry production: For suppression of root and crown rot caused by Colletotrichum spp., mix 2.5-4.2 oz of Heritage Fungicide per 100 gallons of water. Dip plants for 2-5 minutes. Plant treated plants as quickly as possible. It is recommended that transplants be washed to remove excess soil prior to dipping. For continued anthracnose control, follow with foliar applications beginning 2-3 weeks after transplant.

- Do not apply more than 1.0 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

TABLE 25: Specific Use Directions for Tree Nuts (except Almonds, Pecans, and Pistachios)

Crop	Target Diseases	Use Rate oz product/A (Ib ai/A)	Use Rate oz product/0.5 A (Ib ai/A)	Use Rate oz product/ 1,000 sq ft	Remarks
Tree Nuts  Beechnut Brazil nut Butternut Cashew Chestnut Chinquapin Filbert Hickory Macadamia Walnut  Almonds, Pecans, Pistachios: see specific use instructions.	Alternaria leaf and fruit spot (Alternaria alternata) Anthracnose (Colletotrichum acutatum, Glomerella cingulata) Eastern filbert blight (Anisogramma anomale) Late blight (Alternaria alternata) Scab (Cladosporium carpophilum) Septoria leaf spot (Septoria pistaciarum) Shothole (Wilsonomyces carpophilus)	3.2-6.4 (0.10- 0.20)	1.6-3.2 (0.10-0.20)	0.08- 0.15	Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout the season following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.  For all other diseases, begin applications prior to disease development and continue at 7- to 21-day intervals throughout the season.
	Blossom blight (Monilinia laxa, M. fructicola)	6.4 (0.20)	3.2 (0.20)	0.15	For blossom blight, begin applications at early bloom and continue through petal fall. <b>Do not</b> make more than six applications of Heritage Fungicide or other strobilurin fungicide per acre per year.

- Do not apply more than 1.2 lb ai/A per season of azoxystrobin-containing products.
- Do not apply within 45 days of harvest (45-day PHI).

**TABLE 26: Specific Use Instructions for Tropical Fruit** 

	· Opecine ose i			T	<u> </u>
			Use Rate	Use Rate	
		Use Rate	OZ	oz	
	Target	oz product/A	product/0.5	product/1,000	
Crop	Diseases	(lb ai/A)	A (Ib ai/A)	sq ft	Remarks
Tropical	Alternaria leaf	3.2-8.0	1.6-4.0	0.08-0.18	Resistance
Fruit	and fruit spot	(0.1-0.25)	(0.1-0.25)		Management:
Acerola	(Alternaria				Follow the resistance
Atemoya	spp.)				management
Avocado	Anthracnose				guidelines in the
Biriba	(Colletotrichum				Resistance
Canistel	spp.)				Management
Cherimoya	Cercospora leaf				section. Do not
Custard	spot				apply more than two
apple	(Cercospora				sequential
Feijoa	spp.)				applications of
Guava	Powdery mildew				Heritage Fungicide
Ilama	(Erysiphe spp.)				or other Group 11
Jaboticaba	Rust				fungicides before
Jackfruit	( <i>Puccinia</i> spp.)				alternation with a
Longan					fungicide that is not
Loquat					in Group 11.
Lychee					
Mango					Application
Papaya					Directions:
Passionfruit					Heritage Fungicide
Pawpaw					applications should
Persimmon					begin prior to
Pulasan					disease
Pummello					development and
Rambutan					continue throughout
Sapodilla					the season on a 10-
Sapote,					to 14-day schedule,
black					following the
Sapote,					resistance
mamey					management
Sapote,					guidelines.
white					Applications may be
Soursop					made by ground, air
Star apple					or chemigation. An
Starfruit					adjuvant may be
Sugar					added at
apple					recommended rates.
Spanish					
lime Tomorind					
Tamarind					
Uniq fruit					

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

### **VEGETABLE AND HERB PLANTS**

Apply to vegetable and herb plants grown for transplanting.

**TABLE 27: Specific Use Directions for Asparagus Plants** 

	- 15:	Use Rate oz product/	Use Rate oz product/	
Crop	Target Diseases	1,000 sq ft	5,000 sq ft	Remarks
Asparagus	Stemphyllium purple spot (Stemphyllium vesicarium)	0.075-0.18	0.375-0.9	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production on a 7- to 14-day schedule, following the resistance management guidelines. Applications may be made by foliar sprays, including chemigation. An adjuvant may be added at recommended rates. Use a minimum of 10 gallons of water per acre.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- Do not apply within 100 days of harvest (100-day PHI).
- A use rate of 0.18 oz product/1,000 sq ft is equal to 0.25 lb ai/A.

TABLE 28: Specific Use Directions for Brassica Head and Stem Subgroup Plants

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Brassica Head and stem subgroup  Broccoli Chinese broccoli [gai lon] Brussels sprouts Cabbage Chinese cabbage [napa] Chinese mustard cabbage [gai choy] Cauliflower Cavalo broccolo Kohlrabi including all cultivars and/or hybrids of these	Alternaria leaf spot (Alternaria spp.) Downy mildew (Peronospora parasitica) Pin rot (Alternaria spp.)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production on a 7- to 14-day schedule, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates. Use a minimum of 10 gallons of water per acre.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

**TABLE 29: Specific Use Directions for Brassica Leafy Greens Subgroup Plants** 

-		I	_	
		Use Rate	Use Rate	
		oz product/	oz	
		1,000 sq ft	product/	
Crop	Target Diseases	(lb ai/A)	5,000 sq ft	Remarks
Brassica Leafy greens subgroup  Broccoli raab Cabbage, Chinese Collards Kale Mizuna Mustard greens Mustard spinach Rape greens including all cultivars and/or hybrids of these	Black spot (Alternaria spp.) Cercospora leaf spot (Cercospora spp.) White rust (Albugo candida)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production on a 7- to 14-day schedule, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates. Use a minimum of 10 gallons of water per acre.

- Do not apply more than 0.75 lb ai/A per season of azoxystrobin-containing products. May be applied the day of harvest (0-day PHI).

**TABLE 30: Specific Use Directions for Bulb Vegetable Plants** 

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz. product/ 5,000 sq ft	Remarks
Bulb Vegetables Garlic Leek Onion, bulb Onion, green Welsh onion Shallot	Foliar Diseases Cladosporium leaf blotch (Cladosporium allii) Purple blotch (Alternaria porri) Rust (Puccinia allii) White rot (Sclerotium cepivorum)	0.08-0.15 (0.1-0.20)	0.4-0.75	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: For downy mildew, make preventative applications on a 5- to 7-day schedule. For all other diseases, Heritage Fungicide applications should begin prior to disease development and continue
	Botrytis leaf blight (Botrytis aclada) Downy mildew (Peronospora destructor)	0.11-0.18 (0.15-0.25)	0.55-0.9	throughout plant production every 7-14 days, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates.  Mixtures of Heritage Fungicide with insecticides and silicone adjuvants should be tested for crop safety before application to the crop.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products. May be applied the day of harvest (0-day PHI).

**TABLE 31: Specific Use Directions for Celery Plants** 

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Celery	Early blight (Cercospora apii) Late blight (Septoria apicola)  For additional diseases, see Leafy Vegetables.	0.11-0.18 (0.15-0.25)	0.55-0.9	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production every 7-14 days, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0 day PHI).

**TABLE 32: Specific Use Directions for Cucurbit Plants** 

_		Use Rate	Use Rate	
Crop	Target Diseases	oz product/ 1,000 sq ft (Ib ai/A)	oz product/ 5,000 sq ft	Remarks
Cucurbits  Cantaloupe Chayote Chinese- waxgourd Cucumber Gourds Honeydew Melons Momordica spp. (bitter melon, balsam apple) Muskmelon Watermelon Pumpkin Squash Zucchini including cultivars and/or hybrids of these	Anthracnose (Colletotrichum lagenarium) Belly Rot (Rhizoctonia solani) Downy Mildew (Pseudoperonospora cubensis) Gummy Stem Blight (Didymella bryoniae) Leaf spots (Alternaria spp., Cercospora spp.) Myrothecium canker (Myrothecium roridum) Plectosporium blight (Plectosporium tabacinum) Powdery Mildew (Sphaerotheca fuliginea, Erysiphe cichoracearum) Ulocladium leaf spot (Ulocladium cucurbitae)	0.08-0.18 (0.10-0.25 <u>)</u>	0.4-0.9	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11. Do not make more than four (4) foliar applications of Heritage Fungicide or other Group 11 fungicides per crop per acre per year.  Application Directions: For both downy and powdery mildew, make preventative applications on a 5- to 7-day schedule. For belly rot control, the first application should be made at the 1- to 3-leaf crop stage with a second application just prior to vine tip over or 10-14 days later, whichever occurs first. For all other diseases, Heritage Fungicide applications should begin prior to disease development and continue throughout plant production every 7-14 days, following the resistance management guidelines.  Applications may be made by foliar sprays, including chemigation.  An adjuvant may be added at recommended rates. However, do not tank-mix Heritage Fungicide with COC, MSO or silicon adjuvants.  Do not tank-mix Heritage Fungicide with Malathion, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-Pede® or Botran®.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- Do not apply within 1 day of harvest (1-day PHI).

**TABLE 33: Specific Use Directions for Herb and Spice Plants** 

		Use Rate		
		oz product/ 1,000 sq ft	Use Rate oz product/	
Crop	Target Diseases	(Ib ai/A)	5,000 sq ft	Remarks
Herbs & Spices (except basil and black pepper)  Allspice; Angelica; Anise (seed); Anise, star; Annatto; Balm; Borage; Burnet; Camomile; Caper (buds); Caraway; Caraway, black; Cardamom; Cassia (buds); Catnip; Celery seed; Chervil (dried); Chive; Chive, Chinese; Cinnamon; Clary; Clove (buds); Coriander (cilantro or Chinese parsley) (leaf); Coriander (seed); Costmary; Culantro (leaf and seed); Cumin; Curry (leaf); Dill (seed); Dillweed; Fennel, common; Fennel, Florence (seed); Fenugreek; Grains of paradise; Horehound; Hyssop; Juniper (berry); Lavender; Lemongrass; Lovage (leaf and seed); Mace; Marigold; Marjoram; Mustard (seed), Nasturtium; Nutmeg; Parsley (dried); Pennyroyal; Pepper, white; Poppy seed; Rosemary; Rue; Saffron; Sage; Savory, summer and winter; Sweet bay; Tansy; Tarragon; Thyme; Vanilla; Wintergreen; Woodruff; Wormwood	Alternaria leafspot (Alternaria spp.) Corynespora blight (Corynespora cassiicola) Downy mildew (except Basil) (Plasmopara spp., Peronospora spp.) Dill blight (Cercosporidium punctum) Phoma blight (Passalora puncta) Powdery mildew (Erysiphe spp., Sphaerotheca spp.)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin at the onset of disease development and continue throughout plant production on a 7-day schedule, following the resistance management guidelines.  Applications may be made by foliar sprays. An adjuvant may be added at recommended rates. Use a minimum of 30 gallons of water per acre.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).
- Do not apply by aerial application.

**TABLE 34: Specific Use Directions for Basil Plants** 

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Basil	Downy mildew (Peronospora belbahrii)	0.18 (0.25)	0.9	Plug Production*: Apply to emerged plants in plug production trays prior to disease development. Apply uniformly to foliage using a minimum of 3.4 gallons of water/5,000 sq ft (30 gallons/A). Make no more than one application during the plug production phase. Follow the Heritage Fungicide application with alternative chemistries on a weekly schedule, implementing a preventative integrated disease management program.  Finish Production**: Apply to plants following transplant of plugs to trays, pots or containers in which plants are grown to finish. Apply uniformly to foliage using a minimum of 3.4 gallons of water/5,000 sq ft (30 gallons/A). Make no more than one application during the finish production phase. Follow the Heritage Fungicide application with alternative chemistries on a weekly schedule, implementing a preventative integrated disease management program. For specific resistance management programs, contact your state Extension specialist.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

<sup>\*</sup> Plug production refers to the production of a young plant grown from seed in a multi-celled germination tray for a short period of time. After growing to a desired size, the plug is then transplanted in a larger pot or container to grow to a larger size suitable to sell.

<sup>\*\*</sup> Finish production refers to the production of a finished plant grown to a desired size suitable to sell in a garden center, large format retailer, or other retailers selling plants to consumers for home and garden plantings.

TABLE 35: Specific Use Directions for Leafy Vegetable Plants (except Brassica)

<del></del>	T	·		The (except Bracelea)
Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Leafy Vegetables (except Brassica)  Amaranth Arugula Cardoon Celery Celtuce Chervil Chrysanthemum, edible Coriander, leaves (Cilantro) Corn salad Cress Dandelion Dock Endive Fennel Lettuce, head and leaf Orach Parsley Purslane Radicchio Rhubarb Spinach Swiss Chard including cultivars and/or hybrids of these	Foliar Diseases Alternaria leaf spot (Alternaria sonchi, A. spp.) Anthracnose (Microdochium panattonianum, Colletotrichum dematium) Cercospora leaf spot (Cercospora spp.) Septoria leaf spot (Septoria petroselini) White rust (Albugo occidentalis)  Downy mildew (Bremia lactucae) Powdery mildew (Eyrisiphe cichoracearum)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: For both downy and powdery mildew, make preventative applications on a 5- to 7-day schedule. For all other diseases, Heritage Fungicide applications should begin prior to disease development and continue throughout plant production every 7-14 days following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates.  ATTENTION: Applications of Heritage Fungicide to leafy vegetable foliage have contributed to phytotoxicity under certain circumstances. Proceed with caution with regard to tank mixes and adjuvants when treating all leafy vegetables with Heritage Fungicide. Heritage Fungicide must not be tank-mixed on leaf lettuce with Pounce® WP, Aliette®, Warrior® with Zeon™ Technology, or another product that may increase the penetration of Heritage Fungicide into the leaf surface, such as, but not limited to, silicone wetters.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

**TABLE 36: Specific Use Directions for Mint Plants** 

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Mint (Fresh)	Powdery mildew (Erysiphe spp.) Rust (Puccinia menthae)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production on a 7- to 10-day schedule, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates.

- Do not apply more than 0.75 lb ai/A per season of azoxystrobin-containing products.
- For fresh mint, may be applied the day of harvest (0-day PHI).

TABLE 37: Specific Use Directions for Pepper and Other Fruiting Vegetable Plants (except Cucurbits)

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (lb ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Peppers and other Fruiting Vegetables (except cucurbits) Bell Pepper Non-Bell Pepper Sweet Non-Bell Pepper Eggplant Groundcherry Okra Pepino Tomatillo See specific directions for use for Tomatoes.	Anthracnose (Colletotrichum spp.) Cercospora leaf spot (Cercospora capsici) Downy mildew (Peronospora tabacini) Powdery mildew (Sphaerotheca spp.)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production on a 7- to 14-day schedule, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates.

- Do not apply more than 1.0 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

**TABLE 38: Specific Use Directions for Tomato Plants** 

	-	Use Rate	Use Rate	
		oz product/1,000 sq ft	oz product/	
Crop	Target Diseases	(lb ai/A)	5,000 sq ft	Remarks
Tomatoes	Anthracnose (Colletotrichum coccodes) Black Mold (Alternaria alternata) Buckeye Rot (Phytophthora spp.)	0.024-0.08 (0.08-0.10)	0.12-0.4	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.
	Early Blight (Alternaria solani) Powdery Mildew (Oidiopsis sicula) Septoria Leaf spot (Septoria lycopersici) Target spot (Corynespora cassiicola)			Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production following the resistance management guidelines. For late blight, Heritage Fungicide should be applied at 5- to 7-day
	Late Blight ( <i>Phytophthora</i> <i>infestans</i> )	0.08 (0.10)	0.4	intervals. For all other tomato diseases, Heritage Fungicide should be applied on 7- to 21-day intervals.
				Applications may be made by foliar sprays including chemigation.
				Under certain environmental conditions (particularly high temperatures), Heritage Fungicide in combination with high rates of siliconecontaining or oil-containing (petroleum or crop) additives or adjuvants may cause injury. <b>Do not</b> exceed 0.125% adjuvant (v/v). Consult a Syngenta representative for more information concerning additives or adjuvants.
				A tank mixture with Dimethoate may cause crop injury.
				Do not use adjuvants or tank mix Heritage Fungicide with any emulsifiable concentrate (EC) product.

- Heritage should not be applied until 35 days after seeding or 21 days after transplanting plugs to larger pots or containers.
- Do not apply more than 0.6 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

TABLE 39: Heritage Rate Conversion Chart (For use with 4 oz package size only)

oz product/A	oz product/ 1,000 sq ft	Treated Acres/ 4 oz product
1.0	0.025	4.0
1.5	0.035	2.7
2.0	0.05	2.0
2.5	0.06	1.6
3.0	0.07	1.3
3.5	0.08	1.1
4.0	0.09	1.0
4.5	0.1	0.9
5.0	0.11	0.8
5.5	0.13	0.73
6.0	0.14	0.67
6.5	0.15	0.62
7.0	0.16	0.57
7.5	0.17	0.53
8.0	0.18	0.5
8.7	0.2	0.46
13.1	0.3	0.31
17.4	0.4	0.23

#### STORAGE AND DISPOSAL

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

### **Pesticide Storage**

Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, sweep and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

### **Pesticide Disposal**

Pesticide wastes are acutely 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 of the nearest EPA Regional Office for guidance.

#### Container Handling [less than or equal to 50 pounds]

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

### **Container Handling [bags]**

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 by other procedures approved by state and local authorities.

#### CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.

 ${\sf Heritage}^{\it @}, \, {\sf Banner \, Maxx@}, \, {\sf Daconil@}, \, {\sf Secure@}, \, {\sf Warrior}^{\it @} \, \, {\sf with \, Zeon@}, \, {\sf the \, ALLIANCE \, FRAME}$ 

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For non-emergency (e.g., current product information), call Syngenta Crop Protection at 1-800-334-9481.

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

SCP 1093

Heritage Fungicide 1093 MAS 0814 AMEND MAY2015-Hilite – pl – 5/13/15 000100-01093.20150513.HERITAGE\_AMEND\_MAY2015-HI.pdf

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#### SUPPLEMENTAL LABELING

Syngenta Crop Protection, LLC

P. O. Box 18300 Greensboro, North Carolina 27419-8300 SCP 1093



GROUP 11 FUNGICIDE

# Heritage® Fungicide

This supplemental label expires on March 31, 2019 and must not be used or distributed after this date.

Active Ingredient:

Azoxystrobin: methyl (*E*)-2-{2-[6-(2-cyanophenoxy)

Heritage Fungicide is a water-dispersible granule (WG) containing 0.5 lb azoxystrobin per lb product. \*IUPAC

KEEP OUT OF REACH OF CHILDREN.

# **CAUTION**

EPA Reg. No. 100-1093

All applicable directions, restrictions and precautions on the EPA-registered label are to be followed. Before using Heritage Fungicide as permitted according to this supplemental label, read and follow all applicable directions, restrictions, and precautions on the EPA-registered label on or attached to the pesticide product container. This Supplemental Labeling contains revised use instructions and/or restrictions that may be different from those that appear on the container label. This Supplemental Labeling must be in the possession of the user at the time of pesticide application. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

syngenta

# **DIRECTIONS FOR USE**

### **DIRECTIONS FOR ORNAMENTALS**

#### **VEGETABLE AND HERB PLANTS**

Apply to vegetable and herb plants grown for transplanting.

**TABLE 1: Specific Use Directions for Asparagus Plants** 

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft	Use Rate oz product/ 5,000 sq ft	Remarks
Asparagus	Stemphyllium purple spot (Stemphyllium vesicarium)	0.075-0.18	0.375-0.9	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production on a 7- to 14-day schedule, following the resistance management guidelines. Applications may be made by foliar sprays, including chemigation. An adjuvant may be added at recommended rates. Use a minimum of 10 gallons of water per acre.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- Do not apply within 100 days of harvest (100-day PHI).
- A use rate of 0.18 oz product/1,000 sq ft is equal to 0.25 lb ai/A.

**TABLE 2: Specific Use Directions for Brassica Head and Stem Subgroup Plants** 

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Brassica Head and stem subgroup  Broccoli Chinese broccoli [gai lon] Brussels sprouts Cabbage Chinese cabbage [napa] Chinese mustard cabbage [gai choy] Cauliflower	Alternaria leaf spot (Alternaria spp.) Downy mildew (Peronospora parasitica) Pin rot (Alternaria spp.)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production on a 7- to 14-day schedule, following the resistance
Cavalo broccolo Kohlrabi				management guidelines.  Applications may be made by
including all cultivars and/or hybrids of these				foliar sprays including chemigation. An adjuvant may be added at recommended rates. Use a minimum of 10 gallons of water per acre.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

TABLE 3: Specific Use Directions for Brassica Leafy Greens Subgroup Plants

				<u> </u>
		Use Rate oz product/	Use Rate oz	
Crop	Target Diseases	1,000 sq ft (lb ai/A)	product/ 5,000 sq ft	Remarks
Brassica Leafy greens subgroup  Broccoli raab Cabbage, Chinese Collards Kale Mizuna Mustard greens Mustard spinach Rape greens including all cultivars and/or hybrids of these	Black spot (Alternaria spp.) Cercospora leaf spot (Cercospora spp.) White rust (Albugo candida)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production on a 7- to 14-day schedule, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates. Use a minimum of 10 gallons of water per
				acre.

- Do not apply more than 0.75 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

**TABLE 4: Specific Use Directions for Bulb Vegetable Plants** 

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (lb ai/A)	Use Rate oz. product/ 5,000 sq ft	Remarks
Bulb Vegetables Garlic Leek Onion, bulb Onion, green Welsh onion Shallot	Foliar Diseases Cladosporium leaf blotch (Cladosporium allii) Purple blotch (Alternaria porri) Rust (Puccinia allii) White rot (Sclerotium cepivorum)	0.08-0.15 (0.1-0.20)	0.4-0.75	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: For downy mildew, make preventative applications on a 5- to 7-day schedule. For all other diseases, Heritage Fungicide applications should begin prior to disease development and continue
	Botrytis leaf blight (Botrytis aclada) Downy mildew (Peronospora destructor)	0.11-0.18 (0.15-0.25)	0.55-0.9	throughout plant production every 7-14 days, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates.  Mixtures of Heritage Fungicide with insecticides and silicone adjuvants should be tested for crop safety before application to the crop.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

**TABLE 5: Specific Use Directions for Celery Plants** 

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Celery	Early blight (Cercospora apii) Late blight (Septoria apicola)  For additional diseases, see Leafy Vegetables.	0.11-0.18 (0.15-0.25)	0.55-0.9	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production every 7-14 days, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0 day PHI).

**TABLE 6: Specific Use Directions for Cucurbit Plants** 

		Use Rate	Use Rate	
	T (D)	oz product/ 1,000 sq ft	oz product/ 5,000 sq	
Crop	Target Diseases	(lb ai/A)	ft	Remarks
Cucurbits  Cantaloupe Chayote Chinese- waxgourd Cucumber Gourds Honeydew Melons Momordica spp. (bitter melon, balsam apple) Muskmelon Watermelon Pumpkin Squash Zucchini including cultivars and/or hybrids of these	Anthracnose (Colletotrichum lagenarium) Belly Rot (Rhizoctonia solani) Downy Mildew (Pseudoperonospora cubensis) Gummy Stem Blight (Didymella bryoniae) Leaf spots (Alternaria spp., Cercospora spp.) Myrothecium canker (Myrothecium roridum) Plectosporium blight (Plectosporium tabacinum) Powdery Mildew (Sphaerotheca fuliginea, Erysiphe cichoracearum) Ulocladium leaf spot (Ulocladium cucurbitae)	0.08-0.18 (0.10-0.25 <u>)</u>	0.4-0.9	Resistance Management:_Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11. Do not make more than four (4) foliar applications of Heritage Fungicide or other Group 11 fungicides per crop per acre per year.  Application Directions: For both downy and powdery mildew, make preventative applications on a 5- to 7-day schedule. For belly rot control, the first application should be made at the 1- to 3-leaf crop stage with a second application just prior to vine tip over or 10-14 days later, whichever occurs first. For all other diseases, Heritage Fungicide applications should begin prior to disease development and continue throughout plant production every 7-14 days, following the resistance management guidelines.  Applications may be made by foliar sprays, including chemigation.  An adjuvant may be added at recommended rates. However, do not tank-mix Heritage Fungicide with COC, MSO or silicon adjuvants.  Do not tank-mix Heritage Fungicide with Malathion, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-Pede® or Botran®.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- Do not apply within 1 day of harvest (1-day PHI).

**TABLE 7: Specific Use Directions for Herb and Spice Plants** 

	I	· · · · ·		
Сгор	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Herbs & Spices (except basil and black pepper)  Allspice; Angelica; Anise (seed); Anise, star; Annatto; Balm; Borage; Burnet; Camomile; Caper (buds); Caraway; Caraway, black; Cardamom; Cassia (buds); Catnip; Celery seed; Chervil (dried); Chive; Chive, Chinese; Cinnamon; Clary; Clove (buds); Coriander (cilantro or Chinese parsley) (leaf); Coriander (seed); Costmary; Culantro (leaf and seed); Cumin; Curry (leaf); Dill (seed); Dillweed; Fennel, common; Fennel, Florence (seed); Fenugreek; Grains of paradise; Horehound; Hyssop; Juniper (berry); Lavender; Lemongrass; Lovage (leaf and seed); Mace; Marigold; Marjoram; Mustard (seed), Nasturtium; Nutmeg; Parsley (dried); Pennyroyal; Pepper, white; Poppy seed; Rosemary; Rue; Saffron; Sage; Savory, summer and winter; Sweet bay; Tansy; Tarragon; Thyme; Vanilla; Wintergreen; Woodruff; Wormwood	Alternaria leafspot (Alternaria spp.) Corynespora blight (Corynespora cassiicola) Downy mildew (except Basil) (Plasmopara spp., Peronospora spp.) Dill blight (Cercosporidium punctum) Phoma blight (Passalora puncta) Powdery mildew (Erysiphe spp., Sphaerotheca spp.)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin at the onset of disease development and continue throughout plant production on a 7-day schedule, following the resistance management guidelines.  Applications may be made by foliar sprays. An adjuvant may be added at recommended rates. Use a minimum of 30 gallons of water per acre.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).
- Do not apply by aerial application.

**TABLE 8: Specific Use Directions for Basil Plants** 

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Basil	Downy mildew (Peronospora belbahrii)	0.18 (0.25)	0.9	Plug Production*: Apply to emerged plants in plug production trays prior to disease development. Apply uniformly to foliage using a minimum of 3.4 gallons of water/5,000 sq ft (30 gallons/A). Make no more than one application during the plug production phase. Follow the Heritage Fungicide application with alternative chemistries on a weekly schedule, implementing a preventative integrated disease management program.  Finish Production**: Apply to plants following transplant of plugs to trays, pots or containers in which plants are grown to finish. Apply uniformly to foliage using a minimum of 3.4 gallons of water/5,000 sq ft (30 gallons/A). Make no more than one application during the finish production phase. Follow the Heritage Fungicide application with alternative chemistries on a weekly schedule, implementing a preventative integrated disease management program. For specific resistance management programs, contact your state Extension specialist.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

<sup>\*</sup> Plug production refers to the production of a young plant grown from seed in a multi-celled germination tray for a short period of time. After growing to a desired size, the plug is then transplanted in a larger pot or container to grow to a larger size suitable to sell.

<sup>\*\*</sup> Finish production refers to the production of a finished plant grown to a desired size suitable to sell in a garden center, large format retailer, or other retailers selling plants to consumers for home and garden plantings.

TABLE 9: Specific Use Directions for Leafy Vegetable Plants (except Brassica)

Сгор	Target Diseases	Use Rate oz product/ 1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Leafy Vegetables (except Brassica)  Amaranth Arugula Cardoon Celery Celtuce Chervil Chrysanthemum, edible Coriander, leaves (Cilantro) Corn salad Cress Dandelion Dock Endive Fennel Lettuce, head and leaf Orach Parsley Purslane Radicchio Rhubarb Spinach Swiss Chard  including cultivars and/or hybrids of these	Foliar Diseases Alternaria leaf spot (Alternaria sonchi, A. spp.) Anthracnose (Microdochium panattonianum, Colletotrichum dematium) Cercospora leaf spot (Cercospora spp.) Septoria leaf spot (Septoria petroselini) White rust (Albugo occidentalis)  Downy mildew (Bremia lactucae) Powdery mildew (Eyrisiphe cichoracearum)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: For both downy and powdery mildew, make preventative applications on a 5- to 7-day schedule. For all other diseases, Heritage Fungicide applications should begin prior to disease development and continue throughout plant production every 7-14 days following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates.  ATTENTION: Applications of Heritage Fungicide to leafy vegetable foliage have contributed to phytotoxicity under certain circumstances. Proceed with caution with regard to tank mixes and adjuvants when treating all leafy vegetables with Heritage Fungicide. Heritage Fungicide must not be tank-mixed on leaf lettuce with Pounce® WP, Aliette®, Warrior® with Zeon™ Technology, or another product that may increase the penetration of Heritage Fungicide into the leaf surface, such as, but not limited to, silicone wetters.

- Do not apply more than 1.5 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

**TABLE 10: Specific Use Directions for Mint Plants** 

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (lb ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Mint (Fresh)	Powdery mildew (Erysiphe spp.) Rust (Puccinia menthae)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Do not apply more than two sequential applications of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production on a 7- to 10-day schedule, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates.

- Do not apply more than 0.75 lb ai/A per season of azoxystrobin-containing products.
- For fresh mint, may be applied the day of harvest (0-day PHI).

TABLE 11: Specific Use Directions for Pepper and Other Fruiting Vegetable Plants (except Cucurbits)

Crop	Target Diseases	Use Rate oz product/ 1,000 sq ft (lb ai/A)	Use Rate oz product/ 5,000 sq ft	Remarks
Peppers and other Fruiting Vegetables (except cucurbits) Bell Pepper Non-Bell Pepper Sweet Non-Bell Pepper Eggplant Groundcherry Okra Pepino Tomatillo See specific directions for use for Tomatoes.	Anthracnose (Colletotrichum spp.) Cercospora leaf spot (Cercospora capsici) Downy mildew (Peronospora tabacini) Powdery mildew (Sphaerotheca spp.)	0.08-0.18 (0.1-0.25)	0.4-0.9	Resistance Management: Follow the resistance management guidelines in the Resistance Management section. Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production on a 7- to 14-day schedule, following the resistance management guidelines.  Applications may be made by foliar sprays including chemigation. An adjuvant may be added at recommended rates.

- Do not apply more than 1.0 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

**TABLE 12: Specific Use Directions for Tomato Plants** 

Crop	Target Diseases	Use Rate oz product/1,000 sq ft (Ib ai/A)	Use Rate oz product/ 5,000 sq ft	Romarks
Tomatoes	Anthracnose (Colletotrichum coccodes) Black Mold (Alternaria alternata) Buckeye Rot (Phytophthora spp.) Early Blight (Alternaria solani) Powdery Mildew (Oidiopsis sicula) Septoria Leaf spot (Septoria lycopersici) Target spot (Corynespora cassiicola)	0.024-0.08 (0.08-0.10)	0.12-0.4	Remarks  Resistance Management: Do not apply more than one application of Heritage Fungicide or other Group 11 fungicides before alternation with a fungicide that is not in Group 11.  Application Directions: Heritage Fungicide applications should begin prior to disease development and continue throughout plant production following the resistance management guidelines. For late blight, Heritage Fungicide should be applied at 5- to 7-day intervals. For all other tomato
	Late Blight (Phytophthora infestans)	0.08 (0.10)	0.4	diseases, Heritage Fungicide should be applied on 7- to 21-day intervals.  Applications may be made by foliar sprays including chemigation.  Under certain environmental conditions (particularly high temperatures), Heritage Fungicide in combination with high rates of siliconecontaining or oil-containing (petroleum or crop) additives or adjuvants may cause injury. Do not exceed 0.125% adjuvant (v/v). Consult a Syngenta representative for more information concerning additives or adjuvants.  A tank mixture with Dimethoate may cause crop injury.  Do not use adjuvants or tank mix Heritage Fungicide with any emulsifiable concentrate (EC) product.

- Heritage Fungicide should not be applied until 35 days after seeding or 21 days after transplanting plugs to larger pots or containers.
- Do not apply more than 0.6 lb ai/A per season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

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