10182-408 6-22-2000 1/57

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

JUN 22 2000

Michele Schulz
Zeneca Ag Products
1800 Concord Pike
P.O. Box 15458
Wilmington, Delaware 19850-5458

Subject: Heritage Fungicide
EPA Registration Number 10182-408
Your amended labeling dated April 11, 2000

Dear Ms. Schulz,

We have reviewed the subject amended labeling, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended. The amended labeling is acceptable, provided that:

1. You make the following changes in the label:

   a. Clarify the statements referring to use in New York State (page 5). Either change "Heritage Flowable" to "Heritage Fungicide" or else clarify what "Heritage Flowable" is.

   b. As a result of a recent change in Worker Protection Standard (WPS) labeling regarding the use of the term "waterproof glove", add "Some materials that are chemically resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resitance category selection chart.", and change "waterproof gloves" to "chemical-resistant gloves made of any waterproof material" in the Personal Protective Equipment (PPE) statements and in the Agricultural Use Requirements box.

2. You submit one copy of your final printed label before you release product bearing this amended labeling for shipment.

If you have any questions about this letter, please contact John Bazuin at (703)305-7381.

Sincerely yours,

Carl Gable for

Cynthia L. Giles-Parker
Product Manager (22)
Fungicide Branch
Registration Division (7505C)

Attachment: Label stamped "ACCEPTED with COMMENTS"

3/57

ACCEPTED
with COMMENTS
In EPA Letter Dated
JUN 22 2000
Under the Federal Insecticide, Fundicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.
10182-408

HERITAGE® FUNGICIDE

Broad spectrum fungicide for control of plant diseases.

ACTIVE INGREDIENT:

Azoxystrobin: methyl (E)-2-{2-[6-(2-cyanophenoxy) pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate*	50%
INERT INGREDIENTS:	50%
TOTAL	100%

Contains 0.5 lb. ai/lb. product
*IUPAC

EPA REG NO. 10182-408
EPA EST. NO.

NET WT. 1 lb. (.4 kg)
2 lbs. (.9 kg)

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE INSIDE FOR STATEMENT OF PRACTICAL TREATMENT AND PRECAUTIONARY STATEMENTS

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

Manufactured in the UK for distribution by:
Zeneca Ag Products, Inc.
Wilmington DE 19850-5458

STATEMENT OF PRACTICAL TREATMENT

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL 1-800-F-A-S-T-M-E-D (327-8633).

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC, 1-800-424-9300.

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.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

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

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

The active ingredient, Azoxystrobin, in this product can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

Notify state and/or federal authorities and Zeneca Ag Products, Inc. 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 should 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 ZENECA or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ZENECA and Seller harmless for any claims relating to such factors.

ZENECA 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. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ZENECA, and Buyer and User assume the risk of any such use. ZENECA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall ZENECA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ZENECA 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 ZENECA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

ZENECA and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of ZENECA.

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.

HERITAGE Fungicide use on ornamentals is prohibited in Nassau and Suffolk counties in New York State. In the remainder of the state, read and follow all applicable directions, restrictions and precautions on the EPA-registered HERITAGE Flowable product label.

AGRICULTURAL USES

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:

- Goveralls
- Waterproof gloves
- Shoes plus socks

NON-AGRICULTURAL USES

For use to control diseases on 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 is dry.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

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 DISPOSAL:
Plastic Containers: Triple rinse (or equivalent); then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or alternatives allowed by State and local authorities.
Paper/Box Container: Do not reuse container. Completely empty container into application equipment. Then dispose of empty container in sanitary landfill, or alternatives allowed by State and local authorities.

GENERAL INFORMATION

HERITAGE® is a broad spectrum, preventative fungicide with systemic and curative properties recommended for the control of many important plant diseases. HERITAGE may be applied as a foliar spray in alternating spray programs or in tank mixes with other registered, crop protection products. All applications should be made according to the use directions that follow. See Directions regarding TANKMIXES/COMPATIBILITY.

GENERAL USE PRECAUTIONS

Do not graze or feed clippings from treated turf areas to animals. Crops in this label may be planted immediately after last treatment. Do not plant other crops within 45 days after last application.

ATTENTION

HERITAGE is extremely phytotoxic to certain apple varieties.

AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit).

DO NOT spray HERITAGE where spray drift may reach apple trees.

DO NOT spray when conditions favor drift beyond area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State extension agent for spray drift prevention guidelines in your area.

DO NOT use spray equipment which has been previously used to apply HERITAGE to spray apple trees. Even trace amounts can cause unacceptable phytotoxicity to certain apple and crabapple varieties. Please see Table 5 for list of Intolerant Plants.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

INTEGRATED PEST (DISEASE) MANAGEMENT

HERITAGE 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 should be followed. The SPECIFIC USE DIRECTIONS section in this label identifies specific IPM recommendations for each crop. Consult your local agricultural, turf and ornamental authorities for additional IPM strategies established for your area. HERITAGE may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

RESISTANCE MANAGEMENT

A disease management program that includes alternation or tankmixes between HERITAGE and other labeled fungicides that have a different mode of action is essential to prevent pathogen populations from developing resistance to HERITAGE. HERITAGE should not be alternated or tankmixed with fungicides to which resistance has already developed.

~~Zeneca has adopted the FRAC guidelines for strobilurin fungicide usage to prevent development of resistance. These guidelines promote a maximum of three sequential strobilurin sprays before switching to alternative chemistry. FRAC guidelines also limit the strobilurin sprays per crop per season to 50 percent of the total sprays, if more than three sprays are required.~~

Continual use of HERITAGE may allow less sensitive strains of pathogens to increase in the population and reduce the efficacy of HERITAGE. Since HERITAGE is a strobilurin fungicide, avoid alternation with other strobilurins, such as kresoxim-methyl and trifloxystrobin.

Since pathogens differ in their potential to develop resistance to fungicides, the SPECIFIC USE DIRECTIONS section in this label provides resistance management strategies specific for each crop and disease. Consult your local or state agricultural, turf and ornamental authorities for resistant management strategies that are complementary to those in this label. HERITAGE is not cross resistant with other classes of fungicides which have different modes of action.

SPRAYING/MIXING

HERITAGE may be applied with all types of spray equipment commonly used for making ground and aerial applications. Do not apply HERITAGE through any type of ultra low volume (ULV) spray system (less than 3 gallons per acre). Proper adjustments and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control. The higher rates in the rate range and/or shorter spray intervals may be required under conditions of heavy infection pressure, highly susceptible varieties, or when disease conducive environmental conditions exist.

For ground applications, apply HERITAGE in sufficient water volume for adequate coverage and canopy penetration. For aerial applications to non-orchard crops, apply HERITAGE in a minimum of three gallons of water per acre. For aerial applications in orchard crops, apply HERITAGE in a minimum of ten gallons of water per acre. Where feasible ground application should be used because it provides better canopy penetration and coverage.

To prepare spray solution, partially fill the spray tank with clean water and begin agitation. Add the specified amount of HERITAGE to the tank, allowing time for good dispersion, then add an adjuvant, if recommended. If tankmixes are required, product should be added to the spray tank in the following order: HERITAGE, other WG or dry flowable formulations, wettable powders and flowable (aqueous suspensions) products. 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. Make up

only the amount of spray required for immediate use. Sprayers should be thoroughly cleaned immediately after application. Do not use silicone based products with HERITAGE Fungicide due to possible phytotoxicity.

SPRAY DRIFT MANAGEMENT

ATTENTION

HERITAGE is extremely phytotoxic to certain apple varieties.

AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit).

DO NOT spray HERITAGE where spray drift may reach apple trees.

DO NOT spray when conditions favor drift beyond area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State extension agent for spray drift prevention guidelines in your area.

DO NOT use spray equipment which has been previously used to apply HERITAGE to spray apple trees. Even trace amounts can cause unacceptable phytotoxicity to certain apple and crabapple varieties. Please see Table 5 for list of Intolerant Plants.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

Do not apply when weather conditions favor drift from treated areas to non-target aquatic habitat.

Directions for Use Through Sprinkler and Drip Irrigation Systems

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

Application Instructions: Apply HERITAGE at rates and timings as described in this label.

Use Precautions for Sprinkler and Drip Irrigation Applications:

HERITAGE may be applied through drip irrigation systems to potted ornamentals or to bedded, field grown ornamentals for soil-borne disease control. Apply 2-16 oz HERITAGE per acre as a preventative disease application. 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.

Apply this product ~~only~~ through sprinkler irrigation systems including center pivot, 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. Do not apply when wind speed favors drift beyond the area intended for treatment. Crop 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 you should contact 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 water-source contamination from backflow.

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

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional 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 shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe."

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

4. "The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down."

5. "The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected."

6. "Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump)effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock."

7. "Do not apply when wind speed favors drift beyond the area intended for treatment."

TANK MIXES/COMPATIBILITY

HERITAGE is compatible with many commonly used fungicides, liquid fertilizers, herbicides, insecticides and biological control products. If tank mixes are desired, 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 combine HERITAGE 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 to stand at least twenty (20) minutes. If the combination remains mixed or can be re-mixed readily, the mixture is considered physically compatible.

DIRECTIONS FOR APPLICATION

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Almonds	Alternaria leaf and fruit spot (*Alternaria alternata*) Anthracnose (*Colletotrichum acutatum*) Brown Rot Blossom Blight (*Monilinia laxa, M. fructicola*) Leaf Blight (*Seimatosporium lichenicola*) Leaf rust (*Tranzschelia discolor*) Scab (*Cladosporium carpophilum*) Shothole (*Wilsonomyces carpophilus*)	3.2-8.0 (0.10-0.25)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters and proper timing and placement of irrigation. Resistance Management: For blossom blight do not apply more than two sequential sprays of HERITAGE before alternating with a fungicide that has a different mode of action. For all other almond diseases do not apply more than four sequential sprays of HERITAGE before alternation with a fungicide that has a different mode of action. Do not make more than six applications of HERITAGE per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of 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 to improve coverage. For blossom blight begin applications at early bloom and continue through petal fall. For anthracnose, scab and shothole begin applications prior to disease development and continue at 10-14 day intervals throughout the season. Do not apply more than 3.0 pounds product/acre/season (1.5 lb. ai/A). Do not apply within 28 days of harvest.
Apricots	See Stone Fruit		

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Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Bananas Plantains	Black Sigatoka (*Mycosphaerella fijiensis*) Yellow Sigatoka (*Mycosphaerella musicola*)	2.9-4.3 (0.09-0.135)	Integrated Pest (Disease) Management: HERITAGE 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: Do not apply more than two sequential sprays of HERITAGE before alternating with a fungicide that has a different mode of action. Do not make more than eight applications of HERITAGE per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of 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 recommended rates to improve coverage. Do not apply more than 2.16 pounds product/acre/season (1.08 lb ai/A). May be applied the day of harvest.
Post Harvest Applications	Crown Rot/Crown Mold (*Colletotrichum musae, Fusarium pallidoroseum, Acremonium spp., Ceratocystis paradoxa, Glomerella cingulata), Penicillium spp.*	300-400 ppm solution	Apply HERITAGE as a single application spray of a 300-400 ppm solution to achieve good coverage, spray should be directed at the cut ends of the bananas. Alum (1% w/v) should be added to the spray solution. Application of the 300 ppm rate is appropriate for short distance transportation(e.g. within the USA), when a longer time in transport is expected (export) use the 400 ppm rate.

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Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Canola	Blackleg (*Leptosphaeria maculans*) Alternaria Blackspot (*Alternaria spp*) Sclerotinia stem rot (*Sclerotinia sclerotiorum*)	3.2-8.0 (0.1-0.25)	Integrated Pest (Disease)Management HERITAGE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, certified seed, seed treatment and crop rotation. Resistance Management Do not make more than three applications of HERITAGE per acre per year. Application Directions: For blackleg, HERITAGE applications should be made at the 2-4 leaf stage. For Alternaria or Sclerotinia, 8.0 oz product/A should be applied at 10-25% flowering (3-7 days following first flower).For control of Alternaria alone, 4.2 oz product/A may be applied at pod stage (approximately 95% petal fall). Do not make applications later than 95% petal fall (pod stage). Do not make more than three applications. Do not apply more than more than 15 oz product per year or 0.45 lb ai/A per year.
Cantaloupe	See Cucurbits		
Cherry	See Stone Fruit		
Christmas Trees	Diplodia tip blight (*Diplodia pinea*) Lophodermium needlecast (*Lophodermium pinastri*) Swiss needlecast (*Phaeocrytopus gaumannii*)	3.2-8.0 (0.10-0.25)	Integrated Pest (Disease) Management: HERITAGE 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 sprays of HERITAGE before alternating with a fungicide that has a different mode of action. Do not make more than eight applications of HERITAGE per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of disease development and continue throughout the season at 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates to improve coverage. Do not apply more than 4.0 pounds product/acre/season (2.0 lb. ai/A).
Cucumbers	See Cucurbits		

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Cucurbits cantaloupe chayote chinese-waxgourd cucumber gourds melons Momordica spp (bitter melon, balsam apple) honeydew muskmelon watermelon pumpkin squash zucchini	Anthracnose (*Colletotrichum lagenarium*) Belly Rot (*Rhizoctonia solani*) Downy Mildew (*Psuedoperonospora cubensis*) Gummy Stem Blight (*Didymella bryoniae*) Leaf spots (*Alternaria* spp, *Cercospora* spp.) Powdery Mildew (*Sphaerotheca fuliginea*, *Erysiphe cichoracearum*)	3.2-8.0 (0.10-0.25)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation and proper timing and placement of irrigation. Resistance Management: Do not apply more than two sequential applications of HERITAGE before alternating with a fungicide that has a different mode of action. Do not make more than six applications of HERITAGE per crop per acre per year. Application Directions: For both downy and powdery mildew control, maintain a strict one to one alternation program with fungicides that have a different mode of action. Make applications on a 5-7 day schedule. For belly rot control, the first application should be made at the 1-3 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 applications should begin prior to or in the early stages of disease development and continue throughout the season every 7-14 days following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates to improve coverage. HERITAGE should not be tank mixed with COC, MSO or silicon adjuvants. HERITAGE should not be tank mixed with Malathion, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-PEDE® or Botran®. Do not apply more than 3.0 pounds of product/crop/acre/season (1.5 lbs ai/A). Do not apply within 1 day of harvest.
Gourds	See Cucurbits		

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Grapes Muscadines	Downy Mildew (*Plasmopara viticola*) Phomopsis Cane and Leaf Spot (*Phomopsis viticola*) Powdery Mildew (*Uncinula necator*) Black Rot (*Guignardia bidwellii*)	5.1-8.0 (0.16-0.25)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes canopy management through pruning and thinning, proper selection of varieties with disease tolerance, proper timing and placement of irrigation and removal of plant debris in which inoculum overwinters. Resistance Management: Do not apply more than two sequential sprays of HERITAGE before alternating with a fungicide that has a different mode of action. Do not make more than six (6) applications of HERITAGE per acre per year. Application Directions: HERITAGE 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. Do not apply more than 3 pounds product/acre/season (1.5 lb ai/A). Do not apply within 14 days of harvest. **ATTENTION** HERITAGE is extremely phytotoxic to certain apple varieties. AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit). DO NOT spray HERITAGE where spray drift may reach apple trees. DO NOT spray when conditions favor drift beyond area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State extension agent for spray drift prevention guidelines in your area. DO NOT use spray equipment which has been previously used to apply HERITAGE to spray apple trees. Even trace amounts can cause unacceptable phytotoxicity. AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.
Honeydew Melons	See Cucurbits		

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Melons	See Cucurbits		
Muskmelons	See Cucurbits		
Nectarines	See Stone Fruit		
Peaches	See Stone Fruit		
Peanuts	Early Leaf spot (*Cercospora arachidicola*) Late Leaf spot (*Cercosporidium personatum*) Pythium Pod Rot (*Pythium myriotylum*) Rhizoctonia Peg and Pod Rot (*Rhizoctonia solani*) Stem Rot/White Mold (*Sclerotium rolfsii*) Rust (*Puccinia arachidis*) Web blotch (*Phoma arachidicola*)	3.2-12.8 (0.10-0.40)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, proper timing and placement of irrigation, crop rotation and crop residue management. Resistance Management: Do not make more than two applications of HERITAGE per acre per year. Application Directions: HERITAGE should be applied at approximately 60 and 90 days after planting as a foliar application. This application regime may be applied earlier in the season if environmental conditions favor disease development. These two applications of HERITAGE will provide season-long protection against the soil borne diseases labeled and will also provide control of early and late leaf spot for a 10-14 day period after each spray. Additional applications of other labeled fungicides on a leaf spot application schedule will be required to provide season-long disease control of the leaf spot diseases. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates to improve coverage. Do not apply more than 1.6 pounds product/acre/season (0.8 lbs ai/acre/season). Do not apply within 50 days of harvest.

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Pecans	Anthracnose (*Glomerella cingulata*) Scab (*Cladosporium caryigenum*)	3.2-6.4 (0.10-0.20)	Integrated Pest (Disease) Management: HERITAGE 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: Do not apply more than four sequential sprays of HERITAGE before alternation with a fungicide that has a different mode of action. Do not make more than six applications of HERITAGE per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates to improve coverage. Do not apply more than 2.4 pounds product/acre/season (1.2 lb ai/A). Do not apply within 45 days of harvest.
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)	Integrated Pest (Disease) Management: HERITAGE 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: Do not apply more than four sequential sprays of HERITAGE before alternation with a fungicide that has a different mode of action. Do not make more than six applications of HERITAGE per acre per year. Application Directions: HERITAGE applications should begin prior to disease development and continue throughout the season on 7-21 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 3.0 pounds product/acre/season (1.5 LB ai/A). Do not apply within 28 days of harvest.
Plums	See Stone Fruit		

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Potatoes	Early Blight (*Alternaria solani*) Late Blight (*Phytophthora infestans*)	3.2-8.0 (0.1-0.25)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes removal of plant debris, in which inoculum overwinters, selection of varieties with tolerance to disease, clean certified seed, seed piece treatment, and disease forecasting. Resistance Management: Apply HERITAGE in a strict one to one alternation program with fungicides that have a different mode of action, such as BRAVO. Make applications on a 5-7 day schedule. Do not alternate or tank-mix with fungicides to which resistance has developed. Do not make more than six (6) applications per year. Application Directions: **For both early and late blight, maintain the strict one to one alternation program described above.** Early blight - For a 7-day application schedule use HERITAGE 3.2 oz product/A, if the interval is increased to 14 days use the 6.0 oz product/A rate. Late blight - Apply HERITAGE at 3.2 oz product/A on a 7 day schedule. Initiate late blight applications in a preventative schedule prior to disease development according to local practices. If late blight symptoms develop or conditions favor disease increase the HERITAGE rate to 6.0 to 8.0 oz product/A and use a 5-day schedule. Do not make more than six applications per acre per year. Addition of a spreader/sticker may improve coverage. Do not make more than six applications of HERITAGE per acre per year for all diseases. Do not apply more than 3 pounds product/acre/season (1.5 LB ai/A). Do not apply within 14 days of harvest.
Prunes	See Stone Fruit		
Pumpkins	See Cucurbits		

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Rice	**Sheath/Stem Diseases** Aggregate Sheath Spot (*Rhizoctonia oryzae-sativae*) Black Sheath Rot (*Gaeumannomyces graminis var. graminis*) Sheath Blight (*Rhizoctonia solani*) Sheath Spot (*Rhizoctonia oryzae*) Stem Rot (*Sclerotium oryzae*) **Foliar Diseases** Brown Leaf spot (*Cochliobolus miyabeanus*) Leaf Smut (*Entyloma oryzae*) Narrow Brown Leaf spot (*Cercospora oryzae*) **Panicle Diseases** Kernel Smut (*Neovossia barclayana*) Panicle Blast (*Pyricularia griesa*)	3.2-9.6 (0.10 - 0.30)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation, and sound water management practices. Resistance Management: When HERITAGE is being applied for panicle blast on continuous rice acreage (no rotation to other crops) no more than four sequential applications of HERITAGE should be made over multiple years before alternating with a fungicide with a different mode of action. Do not make more than three applications of HERITAGE per acre per year. Application Directions: HERITAGE should be applied prior to or in the early stages of disease development. Applications may be made by ground, air or chemigation. For aerial application, volumes should be 5-10 GPA. An adjuvant may be added at recommended rates to improve coverage. For stem/sheath diseases including sheath blight, stem rot, black sheath rot, aggregate sheath spot and sheath spot apply when disease is less than 4 inches above water line usually between panicle differentiation (PD) +5 days to PD+10 days or at initial sign of disease. Under heavy disease pressure and conditions favorable for disease development, a second application may be applied. For foliar and panicle diseases, apply HERITAGE prior to or in the early stages of disease development. HERITAGE must be applied as a preventative treatment for blast control and applied prior to favorable conditions for blast development. For panicle blast an application should be applied at mid-boot to boot-split but prior to full head emergence. A second application should be applied when panicles are approximately 60-90% emerged from the boot (7-14 days later). Do not treat rice fields used for aquaculture of fish and crustacea. Do not apply when weather conditions favor drift from treated areas to non-target aquatic habitat. Applicators should use care in making applications near non-target aquatic habitats. Do not apply more than 1.4 pounds of product/acre/season (0.7 lbs ai/A). Do not apply within 28 days of harvest. Do not allow release of irrigation or flood water for at least 14 days after the last application.

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Roses	~~Black Spot (*Diplocarpa rosae*)~~ Downy Mildew (*Peronospora sparsa*) Powdery Mildew (*Sphaerotheca pannosa*) Rust (*Phragmidium mucronatum*, *P. tuberculatum*, and other *Phragmidium* spp) Septoria Leaf Spot (*Septoria rosea*) Alternaria Leaf Spot (*Alternaria alternata*)	1.6-8.0 (0.05-0.25)	Integrated Pest (Disease) Management: HERITAGE 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: Do not make more than four (4) sequential applications of HERITAGE before alternating with a fungicide that has a different mode of action. Do not make more than eight applications per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates to improve coverage. Plant Safety: HERITAGE has been shown to be safe when applied to roses. However, all varieties of roses have not been evaluated for safety. Small scale variety safety testing must be conducted to insure plant safety prior to large scale application. In addition, do not tankmix HERITAGE with other fungicides, insecticides, herbicides, fertilizer, etc. unless local experience indicates that the tankmix is safe to roses. Do not apply more than 4.0 pounds product/acre/season (2.0 lb. ai/A).
Squash	See Cucurbits		

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Stone Fruit Apricot Cherry, sweet Cherry, tart Nectarine Peach Plum Plumcot Prune	Scab (*Cladosporium carpophilum*) Alternaria Spot and Fruit Rot (*Alternaria alternata*) Anthracnose (*Colletotrichum pruicola, C. gloeosporioides*) Leaf Rust (*Tranzschelia discolor*) Powdery Mildew (*Sphaerotheca parnnosa, Podosphaera clandestina*) Shot Hole (*Wilsonomyces carpophilus*)	3.2-8.0 (0.1-0.25)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters and pruning to provide sunlight and aeration into the canopy. Resistance Management: For blossom blight do not apply more than two sequential sprays of HERITAGE before alternating with a fungicide that has a different mode of action. For all other diseases do not apply more than four sequential sprays of HERITAGE before alternation with a fungicide that has a different mode of action. Do not alternate or tank mix with fungicides to which resistance has developed in the pathogen population. Do not make more than six applications of HERITAGE per acre per year for all diseases. Do not make more than 4 applications of HERITAGE per acre per year at 8 oz product/A (0.25 lb ai/A). Application Directions: For brown rot blossom blight, - Begin applications at early bloom and continue through petal fall. Do not apply more than two applications of HERITAGE before alternating with fungicides that have a different mode of action. For brown rot on fruit, HERITAGE may be applied to fruit up to the day of harvest. Do not apply more than two applications before alternating with fungicides that have a different mode of action. For scab, begin applications at petal fall and continue at 7-14 day intervals. For all other diseases, begin application at the onset of disease as a protectant fungicide and continue on a 7-14 day schedule. For peaches only, 4.7-8.0 oz of HERITAGE may be used for scab control. Applications may be made by ground, air or chemigation
	Brown Rot Blossom blight and Fruit rot (*Monilinia fructicola, M. laxa*)	6.4-8.0 (0.2-0.25)	Do not apply more than 2.4 pounds product/acre/season (1.2 lb ai/A). May be applied the day of harvest.

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
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*)	0.8-3.2 (0.025-0.10)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes proper selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters, plant residue management, crop rotation and proper timing and placement of irrigation. Resistance Management: When HERITAGE is being applied for the control of early blight, Septoria leaf spot and/or anthracnose, no more than four sequential applications of HERITAGE should be made before alternating with a fungicide with a different mode of action. When HERITAGE is being applied for the control of late blight, no more than two sequential applications of HERITAGE should be made before alternation with a fungicide with a different mode of action. If late blight should occur during an early blight spray program, switch immediately to the late blight spray program beginning with a fungicide that has a different mode of action. Do not make more than eight applications per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of disease development and continue throughout the season following the resistance management guidelines. For late blight HERITAGE should be applied at 5-7 day intervals, maintain a strict one to one alternation program with fungicides that have a different mode of action. For all other tomato diseases HERITAGE should be applied on 7-21 day intervals. Applications may be made by ground, air or chemigation. HERITAGE should not be applied within +/-6 days of a postemergence broadcast application of Sencor. Do not apply with an adjuvant due to the potential for phytotoxicity. Do not apply more than 1.6 pounds product/acre/season (0.8 lb ai/A) May be applied the day of harvest.
	Late Blight (*Phytophthora infestans*)	1.6-3.2 (0.05 - 0.10)	

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Tree Nuts Almonds(see specific use instructrions) Beechnut Brazil nut Butternut Cashew Chestnut Chinquapin Filbert Hickory Macadamia Pecan Walnut Pistachios(see specific use instructions)	Alternaria leaf and fruit spot (*Alternaria alternata*) Anthracnose (*Colletotrichum acutatum, Glomerella cingulata*) Late blight (*Alternaria alternata*) Scab (*Cladosporium carpophilum*) Septoria leaf spot (*Septoria pistaciarum*) Shothole (*Wilsonomyces carpophilus*)	3.2-6.4 (0.10-0.20)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters and proper timing and placement of irrigation. Resistance Management: For blossom blight do not apply more than two sequential sprays of HERITAGE before alternating with a fungicide that has a different mode of action. For all other diseases do not apply more than four sequential sprays of HERITAGE before alternation with a fungicide that has a different mode of action. Do not make more than six applications of HERITAGE per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of 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 to improve coverage. For blossom blight begin applications at early bloom and continue through petal fall. For all other diseases begin applications prior to or in the early stages of disease development and continue at 7-21 day intervals throughout the season.
	Blossom Blight (*Monilinia laxa, M. fructicola*)	6.4 (0.20)	Do not apply more than 2.4 pounds product/acre/season (1.2 LB ai/A). Do not apply within 45 days of harvest.
Watermelon	See Cucurbits		

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Wheat	Leaf Rust (*Puccinia recondita* f.sp. *tritici*) Powdery Mildew (*Erysiphe graminis*) Stripe Rust (*Puccinia striiformis*) Stem Rust (*Puccinia graminis*) Septoria Leaf and Glume Blotch (*Septoria tritici, Septoria nodorum*) Tan Spot (*Pyrenophora tritici-repentis*)	2.2- 6.4 (0.07-0.20)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes proper selection of varieties with disease tolerance, proper timing and placement of irrigation, removal of plant debris in which inoculum overwinters, plant residue management, and crop rotation. Resistance Management: Do not make more than two applications of HERITAGE per acre per year. Application Directions: HERITAGE should be applied prior to or in the early stages of disease development from jointing (Feekes 6 or Zadok's 31) up to late head emergence (Feekes 10.5 or Zadok's 59). Applications may be made by ground, air or chemigation. A crop oil concentrate adjuvant may be added at 1.0% V/V to optimize efficacy. Do not apply until after forage stage (Feekes 6 or Zadok's 31). Do not apply later than Feekes growth stage 10.5 (Zadok's growth stage 59). Do not harvest treated wheat for forage. Do not apply more than 0.8 pounds product/acre/season (0.4 lb ai/A). Do not apply within 14 days of harvest for hay. Do not apply within 45 days of harvest for grain and straw.
Zucchini	See Cucurbits		

HERITAGE Rate Conversion Chart

Ounces Product/A	Lb ai/A	Treated Acres/Lb Product
1.0	0.03	16.0
1.5	0.05	10.7
2.0	0.06	8.0
2.5	0.08	6.4
3.0	0.09	5.3
3.5	0.11	4.6
4.0	0.13	4.0
4.5	0.14	3.7
5.0	0.16	3.2
5.5	0.17	2.9
6.0	0.19	2.7
6.5	0.20	2.5
7.0	0.22	2.3
7.5	0.23	2.1
8.0	0.25	2.0
8.5	0.27	1.9
9.0	0.28	1.8
9.5	0.30	1.7
10.0	0.31	1.6
10.5	0.33	1.5
11.0	0.34	1.5
11.5	0.36	1.4
12.0	0.38	1.3
12.5	0.39	1.3

Amount of HERITAGE Fungicide to Mix 100 Gallons for Post-Harvest Applications

HERITAGE Use Rate	100.0 gals Spray Solution
300 ppm	9 oz
400 ppm	12 oz

TURF:

HERITAGE is recommended for control of ~~anthracnose, brown patch, cool weather brown patch (yellow patch), Fusarium patch, gray leaf spot, gray snow mold (Typhula blight), leaf spot, melting out, necrotic ring spot, pink patch, pink snow mold, Pythium blight, Pythium root rot, red thread, Rhizoctonia large patch, southern blight, spring dead spot, summer patch, take-all patch, and Zoysia patch on~~ certain pathogens causing foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildew, molds, and rusts of turfgrass plants. HERITAGE fungicide may be used to control certain diseases on golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Integrated Pest (Disease) Management: 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: Some turf disease pathogens are known to have developed resistance to products used repeatedly for their control. HERITAGE should be applied at full use rates in a tank mix or alternation program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Since HERITAGE is a strobilurin fungicide, avoid alternation with other strobilurins, such as kresoxim-methyl and trifloxystrobin. Do not apply more than two sequential HERITAGE applications for Gray Leaf Spot and *Pythium* spp. control. For all other diseases when *Pythium* spp. is not present, do not apply more than ~~four~~ three sequential applications of HERITAGE.

Application Directions: HERITAGE should be applied prior to or in the early stages of disease development. Mix HERITAGE with the required amount of water and apply as a dilute spray application in 2-4 gallons of water per 1000 square feet (87-174 gallons per acre). Repeat applications at specified intervals for as long as required. For spot treatments, use 0.2 oz HERITAGE per 1 to 2 gallons of water. Do not apply more than 10 lbs product/acre/year (3.7 oz product/1000 square feet/year). Applications may be made by ground only.

For use with soil injection applications:

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 at 0.2 to 0.4 ounces per 1000 square feet. Spray carrier volume should fall within 30-150 gallons of water per 1000 square feet. Injection hole spacing of 1 inch by 1 inch is recommended for optimum control. Injection depth should be no greater than 2 inches. One

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

For use in the establishment of turfgrass from seed or in overseeding of dormant turfgrass:

HERITAGE may be used for control of certain turfgrass diseases associated with turfgrass establishment from seed. HERITAGE may also be used during overseeding of dormant turfgrass.

HERITAGE may be safely applied before or after seeding or at seedling germination and emergence to ryegrass, bentgrass, bluegrass, and fescue turfgrass types. See Application Directions section.

Rate Ranges: Use the shorter specified application interval and/or use the higher specified rate when prolonged favorable disease conditions exist.

Dollar Spot: HERITAGE does not control dollar spot. ~~HERITAGE is compatible in tank mixes with many other fungicides that control dollar spot. Always tank mix HERITAGE with another fungicide that controls dollar spot when this disease is present.~~ During periods of dollar spot pressure, always mix Heritage with DACONIL® or other dollar spot control fungicide. HERITAGE is compatible in tank mixes with many other fungicides that control dollar spot. Follow directions under TANK MIXES/COMPATIBILITY above.

DIRECTIONS FOR APPLICATION FOR TURF DISEASES

Target Diseases	Use Rate (oz product per 1000 sq ft)	Application Interval (days)	Remarks*
Anthracnose (*Colletotrichum graminicola*)	0.2-0.4	14-28	~~Apply when conditions are favorable for disease development.~~ 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.
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.
Fusarium Patch (*Microdochium nivale*)	0.2-0.4	14-28	~~Apply when conditions are favorable for disease development.~~ 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.

Target Diseases	Use Rate (oz product per 1000 sq ft)	Application Interval (days)	Remarks*
Gray Snow Mold Typhula blight *(Typhula incarnata, ~~T. ishikariensis~~)*	0.7 0.4	single application 10-14	Make a single application of 0.7 oz or two applications of 0.4 oz. spaced 10-14 days apart in late fall just before snow cover. ~~Tankmixing with another snow mold fungicide may enhance control under severe disease pressure.~~ Tank mixing with another snow mold fungicide. such as Daconil, may enhance control under severe disease pressure.
Leaf Rust Stem Rust Stripe Rust *(Puccinia spp.)*	0.2 to 0.4	14 to 28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Leaf spot *(Bipolaris sorokiniana)* Melting Out *(Drechslera poae)*	0.2-0.4 0.2-0.4	14-21 14-21	Apply when conditions are favorable for disease development. 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)*	0.7 0.4	single application 10-14	Make a single application of 0.7 oz or two applications of 0.4 oz. spaced 10-14 days apart in late fall just before snow cover. ~~Tankmixing with another snow mold fungicide may enhance control under severe disease pressure.~~ Tank mixing with another snow mold fungicide. such as Daconil may enhance control under severe disease pressure.
Powdery Mildew *(Erysiphe graminis)*	0.2 to 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	~~Begin applications before disease is present.~~ Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development. During periods of prolonged favorable conditions, treat on the 10 day application interval. For use on newly seeded as well as established turf.
Red Thread *(Laetisaria fuciformis)* Rhizoctonia Large Patch *(Rhizoctonia solani)*	0.2-0.4 0.2-0.4	14-28 14-28	Apply when conditions are favorable for disease development. Make one or two applications in fall or when conditions are favorable for disease development.
Rhizoctonia Leaf Spot *(Rhizoctonia zeae)*	0.2 to 0.4	14 to 28	Apply when disease conditions are favorable for disease development.

Target Diseases	Use Rate (oz product per 1000 sq ft)	Application Interval (days)	Remarks*
Southern Blight *(Sclerotium rolfsii)*	0.2-0.4	14-28	Apply when conditions are favorable for disease development.
Spring Dead Spot *(Leptosphaeria korrae)* or *(Gaeumannomyces graminis var. graminis)* or *(Ophiosphaerella herpotricha)*	0.2-0.4	14-28	~~Make one or two applications in fall, or when conditions are favorable for disease development.~~ Apply 1 or 2 applications approximately one month prior to bermudagrass dormancy. 1/4" to ½" of irrigation directly after application is recommended. Reapply 14 to 28 days later.
Summer Patch *(Magnaporthe poae)*	0.2-0.4	14-28	Apply when conditions are favorable for disease development.
Take-all patch *(Gaeumannomyces graminis var. avenae)*	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 and/or Gaeumannomyces incrustana)*	0.2-0.4	14-28	~~Make one or two applications in late fall before snow cover or when conditions are favorable for disease development~~. Apply 1 or 2 applications approximately one month prior to zoyiagrass dormancy.. Reapply 14 to 28 days later. ~~Do not apply on top of snow.~~

* Do not apply more than two sequential applications of HERITAGE for control of Gray Leaf Spot and *Pythium* spp.
For all other diseases when Pythium spp is not present, do not apply more than ~~four~~ three sequential applications of HERITAGE.

HERITAGE Rate Conversion Chart for Turf

Ounces Product Per 1000 Sq. Ft	Ounces A.I. Per 1000 Sq. Ft	Ounces Product Per Acre	Pounds Product Per 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
0.70	0.35	30.5	1.9

Amount of HERITAGE to Mix 100 Gallons for Turf Applications

	Spray Volume (gallons/1000 square feet)		
HERITAGE Use Rate	2.0 gals	3.0 gals	4.0 gals
0.2 oz	10 oz	6.7 oz	5 oz
0.4 oz	20 oz	13.3 oz	10 oz
0.7 oz.	35 oz.	23.3 oz	17.5 oz

ORNAMENTALS:

HERITAGE Fungicide is recommended for control of certain pathogens causing 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-houses, outdoor nurseries, retail nurseries, and other residential and commercial landscape areas.

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. 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: Some ornamental disease pathogens are known to have developed resistance to fungicides used repeatedly for their control. HERITAGE Fungicide should be applied in an alternation or tankmix program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. 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 broadcast or banded spray targeted at the foliage or crown of the plant. Apply to runoff in sufficient water 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 (plus alternations for resistance management) for as long as required. Applications may be made by ground only.

HERITAGE Fungicide applications should begin prior to or in the early stages of disease development and continue throughout the season at specified intervals following resistance management guidelines. HERITAGE Fungicide works best when used as part of a preventative disease management program.

Use only surfactants approved for ornamental plants in combination with HERITAGE Fungicide. Do not use silicone based products with HERITAGE Fungicide due to possible phytotoxicity. Always test tankmixes on a small group of representative plants prior to broadscale use.

Apply HERITAGE Fungicide at use rates of 1-4 oz/100 gallons and every 7-28 days (or as otherwise specified for a specific plant or disease). ~~The addition of a non-silicone based wetter/sticker at 0.06% v/v (8 oz/100 gallons) is recommended for best results.~~ The addition of

a non-silicone based wetter-sticker at the recommended use rate may enhance coverage on hard-to-wet plant foliage.

Use the lower rates (1-3 oz/100 gallons) and/or longer spray intervals (10-28 days) under light to moderate disease pressure. Use the higher rates (2-4 oz/100 gallons) and/or the shorter intervals (7-14 days) under environmental conditions which promote severe disease development. Allow at least 2 hours drying time prior to overhead irrigation for foliar disease control.

HERITAGE may be applied to control ~~certain~~ soilborne, seedling, and crown diseases of production ornamentals (greenhouse, shadehouse, and container grown, ~~and field grown~~) as a preventative, drench treatment prior to infection. Good coverage of the pre-infection area (root zone, root ball, crown, etc.) is necessary for satisfactory control. HERITAGE may be drench applied to container grown ornamentals using 0.2-0.9 oz/100 gallons of water. Apply 1-2 pints of the solution per square foot surface area on a 7-28 day interval. Apply drench prior to infection as healthy roots are necessary to optimize product uptake, systemic translocation and disease protection.

For resistance management do not make more than three sequential drench applications of HERITAGE before alternating with a fungicide of a different mode of action.

Caution should be taken before making application of HERITAGE 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.

HERITAGE may be applied through drip irrigation systems to potted ornamentals or to bedded, field grown ornamentals for soil-borne disease control. Apply 2-16 oz HERITAGE per acre as a preventative disease application. 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.

Use of HERITAGE as a "rescue" (late curative or eradicant) treatment may not always result in satisfactory disease control.

Do not exceed 10 lbs product/crop acre/year or 8 applications/crop/year.

~~Allow at least 2 hours drying time prior to overhead watering. Do not exceed 600 gallons spray volume per acre. Use sufficient volume to achieve thorough coverage of plant tissue.~~
Do not exceed 600 gallons spray volume per acre for foliar applications. For drench and crown applications, do not exceed 2 pints volume per square foot.

In addition, do not tankmix HERITAGE Fungicide with other fungicides, insecticides, herbicides, fertilizer, adjuvants, etc, unless local experience indicates that the tankmix is safe to ornamental plants.

Do not apply HERITAGE Fungicide to apple, or cherry trees due to possible phytotoxicity. Further, 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.

HERITAGE may be applied to certain varieties of crabapple for control of apple scab. HERITAGE has been shown to be safer when applied to the species and varieties listed in Table 4. However, due to the large number of genera, species, and varieties of crabapple, it is impossible to test every one for tolerance to HERITAGE Fungicide. The professional user should conduct small scale testing to insure plant safety prior to broadscale commercial use on plant genera and species not listed on this label.

TABLE 1: Diseases Controlled: When used in accordance with the label directions, HERITAGE Fungicide will provide control of the following diseases of ornamental plants:

DISEASE (Pathogen)	SPECIAL USE COMMENTS
1. CONIFER BLIGHTS	
a. Phomopsis Blight (*Phomopsis juniperovora*)	Apply 1-4 oz/100 gal every 7-28 days
b. Tip Blight (*Sirococcus strobilinus*)	Apply 1-4 oz/100 gal every 7-28 days
2. LEAF BLIGHTS/LEAF SPOTS	
a. Alternaria Leaf Spot (*Alternaria* spp.)	Apply 1-4 oz/100 gal every 7-28 days
b. Anthracnose (*Colletotrichum spp., Elsinoe spp.*)	Apply 1-4 oz/100 gal every 7-28 days
c. Downy Mildew of Rose (*Peronospora sparsa*)	Apply 2-4 oz/100 gal every 7-21 days during periods of active plant growth and prior to dormancy or severe infection.
d. Entomosporium Leaf Spot (*Entomosporium mespili*)	Apply 1-4 oz/100 gal every 7-28 days
e. Fern Anthracnose (*Colletotrichum acutatum*)	Apply 3-6 oz/acre every 7-14 days. Use higher rates and/or shorter spray intervals under conditions conducive to high disease pressure. ~~Do not apply through air blast sprayer due to possible phytotoxicity.~~ Do not apply in less than 100 gallons of water per acre.
f. Iris Leaf Spot (*Mycosphaerella macrospora*)	Apply 2-4 oz/100 gal every 7-21 days
g. Leaf spot (*Cladosporium echinulatum*)	Apply 1-4 oz/100 gal every 7-28 days
~~h. Rose Blackspot (*Diplocarpon rosea*)~~	~~Apply 4-8 oz/100 gal every 7-14 days Apply HERITAGE Fungicide on a 7 day interval unless disease pressure is light. Under severe disease conditions or if disease is already present, HERITAGE Fungicide may be tankmixed with another rose blackspot fungicide. Do not exceed 24 oz/acre/application~~
~~hi~~. Myrothecium leaf spot (*Myrothecium ~~spp.~~*-rordum)	Apply 1~~2~~-4 oz/100 gal every 7-21 days
~~ij~~. Downy Mildew of Bedding Plants ~~of Snapdragon~~ (*Peronospora ~~antirrhini~~* spp)	~~Apply 1-4 oz/100 gal every 7-28 days~~ Apply 1-2 oz every 7-14 days prior to infection. Do not apply the 2 oz rate on less than 14 day spray intervals.
~~jk~~. ~~Apple~~-Scab (*Venturia inaequalis*)	Apply 1-4 oz/100 gal every 10-28 days. Do not apply to apple trees. For crab apples only, see Table 4 for tolerant species.
k. Marrsonina leaf spot (*Marrsonina spp.*)	Apply 1-4 oz/100 gal every 14-28 days.
l. Cercospora Leaf Spot (*Cercospora spp.*)	1-4 oz/100 gal every 7-28 days.

DISEASE (Pathogen)	SPECIAL USE COMMENTS
3. POWDERY MILDEW	Preventative applications only. Do not make more than 2 sequential applications before rotating to another class of fungicides.
a. *Erysiphe pannosa, Erysiphe spp.*	Apply 1-4 oz/100 gal every 7-28 days
b. *Microsphaera azaleae*	Apply 1-4 oz/100 gal every 7-28 days
c. *Sphaerotheca pannosa*	Apply 1-4 oz/100 gal every 7-28 days
4. RUSTS	
a. Needle Rust (*Melampsora occidentalis*)	Apply 1-4 oz/100 gal every 7-28 days
b. *Phragmidium spp.*	Apply 1-4 oz/100 gal every 7-28 days
c. *Puccinia spp.*	Apply 1-4 oz/100 gal every 7-28 days
d. *Gymnosporangium spp.*	Apply 1-4 oz/100 gal every 7-28 days
5. FLOWER BLIGHTS	
a. Anthracnose (*Collectotrichum spp., Elsinoe spp.*)	Apply 1-4 oz/100 gal every 7-28 days
b. Botrytis Blight (*Botrytis cinerea*)	~~Apply 4-8 oz/100 gal every 7-21 days For suppression only. Do not exceed 24 oz/acre.~~ Apply 2-4 oz/100 gallons every 7-21 days prior to infection.
6. SHOOT/STEM DISEASES	
a. Aerial/Shoot Blight (Phytophthora spp.)	Apply 1-2 oz/100 gal every 7-28 days
7. SOILBORNE DISEASES (Directed Spray)	For directed spray applications utilize the following rates below.
a. *Rhizoctonia solani*	Apply 1-4 oz/100 gal every 7-21 days
b. *Sclerotium rolfsii*	Apply 1-4 oz/100 gal every 7-21 days
c. *Fusarium spp.*	Apply 1-4 oz/100 gal every 7-21 days
~~d. *Phytophthora spp.*~~	~~Apply 1-4 oz/100 gal every 7-21 days~~
~~e. *Pythium spp.*~~	~~Apply 1-4 oz/100 gal every 7-21 days~~
8. SOILBORNE DISEASES (Drench)	See application directions and rates under Ornamentals Section for drench directions.

PLANT SAFETY: HERITAGE Fungicide has been shown to be safe when applied to the ornamental plants listed in Tables 2,3 and ~~3~~4. However, due to the large number of genera, 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 genera, species, or varieties of ornamental and nursery plants not specified on this label. The professional user should conduct small scale testing to insure plant safety prior to broadscale commercial use on plant genera and species not listed in this label.

In addition, do not tankmix HERITAGE Fungicide with other fungicides, insecticides, herbicides, fertilizer, adjuvants, etc, unless local experience indicates that the tankmix is safe to ornamental plants.

Do not apply HERITAGE Fungicide to certain apple, crabapple, or cherry trees due to possible phytotoxicity. Further, 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.

Tolerant Ornamental Plants: HERITAGE Fungicide has been found to be safe when applied to the plants listed in Tables 2 and 3 when applied according to recommended application methods, rates, and timings:

TABLE 2: Tolerant Plants Listed by Botanical Name:

BOTANICAL NAME	COMMON NAME	DISEASES
Abelia ~~x grandiflora~~ spp.	Abelia	2
Abies fraseri	Fraser fir	1,4
Acer palmatum	Japanese maple	2
Acer saccharum	Sugar maple	2
Ageratum spp.	Floss-Flower	3,4
Ageratum spp.	Pussy's-Foot	3,4
Aglaonema spp.	Chinese evergreen	2,4
Ajuga reptans	Bugle, Bugleweed	3
Antirrhinum spp.	Snap-Dragon	2ij,3,4
Aphelandra spp.	Zebra-Plant	2
Artemisia spp.	Mugwort, Sagebrush	2
Artemisia spp.	Wormwood	2
Aster spp.	Aster, Starwort	~~4~~
Aucuba japonica	Japanese aucuba, Japanese laurel	7
Begonia spp.	Begonia	2,3
~~*Bellis, Anthemis*~~	~~Daisy~~	~~2,3~~
Berberis thunbergii	Barberry	3,4
Betula nigra	River birch	3,4
Bougainvillea spp.	Bougainvillea	2
Brassaia actinophylla	Rubber-tree, Umbrella-tree	2,7
Buddlejia davidii	Buddlejia, Butterfly-bush	2
~~*Buddleja lochinch*~~	~~Butterfly Bush~~	~~2~~

BOTANICAL NAME	COMMON NAME	DISEASES
Buxus sempervirens	Boxwood	2,7a
Caladium spp.	Caladium	7
Camellia japonica	Camellia	2
Caryota urens	Sago Palm	2,7
Catharanthus roseus	Vinca	2
Ceanothus sanguineus	Wild lilac	3
Ceanothus spp.	Ceanothus, California lilac, Snowball	3
Cedrus atlantica	Atlas cedar	~~2~~,4
Cedrus spp.	White cedar	2,4
Cercis occidentalis	Western redbud	2
Chamaecyparis ~~obtusa~~ spp.	Cypress, Leland cypress	1
Chamaecyparis pisifera	~~Cypress~~Sawara cypress	1
~~*Chamaecyparis spp.*~~	~~Leyland Cypress~~	~~1~~
Chamaedora elegans	Parlor palm	7
Chrysanthemum spp.	Chrysanthemums	2,7c
~~*Chrysanthemum morifolium*~~	~~Chrysanthemum~~	~~2,7c~~
Clethra alnifolia	Clethra, White alder	2
Cornus spp.	Dogwood, Pink dogwood, Flowering dogwood	2b,3
Cortaderia selloana	Pampas grass	3
Cotoneaster adpressus	Creeping cotoneaster	7
Cotoneaster horizontalis	Cotoneaster - variegated rockspray	7
Cyclamen spp.	Cyclamen	7c
Cyperus spp.	Cyperus	1
Delphinium spp.	Larkspur	2
Dianthus caryophyllus	Carnation	3,4
Dianthus spp.	Pink	3,4
Dieffenbachia spp.	Dumb-Cane	2,~~2i~~
Dietes iridiodes	African iris, Butterfly iris	4c
Digitalis spp.	Foxglove	2,3
Epipremnum spp.	Pothos	2
Erica dareyensis	Heather	2

BOTANICAL NAME	COMMON NAME	DISEASES
Euonymus alata	Dwarf winged euonymus	2
Euonymus alatus	Burning bush	2
Euonymus japonicus	Evergreen euonymus	2
Euphorbia ~~pulcherrima~~ spp.	Poinsettia	2a
Fatsia japonica	Japanese fatsia, Paper-plant	2
Ficus spp.	Fig	2
Forsythia viridissima	Forsythia	2
Gaillardia spp.	Blanket-Flower	2
Gardenia jasminoides	Gardenia	3
Geranium spp.	Cranesbill	5b
Gerbera jamesonii	Gerber daisy, Transvaal daisy	3
Hedera algeriensis	Algerian ivy	2
Hedera helix	English ivy	2
Hibiscus moscheutos	Hibiscus	2,3
Hibiscus rosa-sinensis	Hibiscus	2,3
Hibiscus syriacus	Rose of Sharon	2,3
Hosta spp.	Hosta	2
Hydrangea macrophylla	French hydrangea	2l,3
Hydrangea spp.	Hydrangea	2l,3
Ilex spp.	Holly, Winterberry, Yaupon	3
Impatiens spp. [1]	Balsam, Impatiens [1]	2a,7a
Itea virginica	Virginia willow	3,4
Juniperus procumbens	Juniper	1a,4
Juniperus scopulorum	Juniper	1a,4
Juniperus spp.	Juniper	1a,4
Juniperus virginiana	Red cedar	1a,4
Lagerstroemia indica ~~x fauriei~~	Crapemyrtle	2l,3
Laurus nobilis	Laurel	3
~~*Ligustrum japonicum*~~	~~Japanese Privet~~	~~3~~
Liriope muscari	Lily-turf	2
Magnolia grandiflora	Southern magnolia	2
Magnolia soulangiana	Saucer magnolia	2
Magnolia spp.	Magnolia	2

BOTANICAL NAME	COMMON NAME	DISEASES
Malus spp.	Crab apple (See Table 4 for variety list)	2j
Nandina domestica	Nandina	2
Nerium oleander	Oleander, Rose-bay	2
Pelargonium spp.	Geranium	3,4,5b
Pennisetum alopecuroides	Grass	2
Peperomia spp.	Baby rubber-plant	2,7
Petunia spp.	Petunia	6a
Phalaris spp.	Dwarf pampas grass	3
Philodendron spp.	Philodendron	2
Phlox spp.	Phlox	3
Phoenix dactylifera	Date palm	2,7
Phoenix roebelenii	Roebelin's palm	2,7
Photinia glabra	Red-tip photinia	2,3,4
~~*Photinia x fraseri*~~	~~Photinia, Redtop~~	~~2~~
Picea abies	Norway spruce	1
Picea glauca	White spruce	1
Picea pungens	Blue spruce	1
Pieris japonica	Japanese andromeda	2,7
Pinus muhgo	Muhgo pine	1b,4
Pinus nigra	Black pine	1b,4
Pinus silvestris	Scotch pine	1,4
Pinus spp.	Pine	1b,4
Pinus strobus	Eastern white pine	1b,4
Pittosporum spp.	Australian laurel	3,4
Pittosporum tobira	Mock-orange	3,4
Plectranthus spp.	Swedish ivy, Coleus	2
Populus spp.	Aspen Trees	2k
Potentilla spp.	Cinquefoil	2
Primula spp.	Primrose	2
Prunus pumila	Cherry	2,5
Prunus spp.	Flowering plum, Purple-leaf plum	2,5
Pseudotsuga spp.	Douglas fir	1,4

BOTANICAL NAME	COMMON NAME	DISEASES
Pyrus calleryana	Bradford's pear	3
Quercus falcata	Red oak	2,3
Quercus palustris	Pin oak	2,3
Rhaphiolepsis indica	Indian hawthorn	2,3,4
Rhododendron spp.	Azaleas, Rhododendron	2b,3,6,7
Rosa spp.	Rose	~~2h,~~2c,3,4b
Rosmarinus spp.	Rosemary (prostrate)	2
Rudbeckia ~~fugida~~ hirta	Black-eyed-susan	2
Rumohra adiantiformis	Leatherleaf fern	2b
Salvia spp.	Sage	3,4
Schlumbergera	Holiday cactus	2,7
Sedum spp.	Orpine, Stonecrop	2
Sempervivum spp.	Live-forever, House-Leek	2
Setaria spp.	Ribbon-grass	2,3
Spathiphyllum floribundium	Peace lily	2hi, 2l,7
Spirea budalda	Spirea	3
Spirea japonica	Spirea	3
Syagrus romanzoffianum	Queen palm	2
Tagetes spp.	Marigold	2a
Taxus baccata	Spreading yew	7
Thujopsis spp.	Arborvitae	2
Thymus serphyllum	Creeping thyme	2
Tsuga spp.	Hemlock	4
Verbena spp.	Verbena, Vervain	3
Viburnum spp.	Viburnum	2,3,4
Vinca spp.	Periwinkle	2,6a
Viola spp. [1]	Viola, Pansy [1]	2
Wiegela florida	Pink wiegela	2
Yucca spp.	Yucca	7
Zinnia spp.	Zinnia	2a,3

[1] Do not exceed 2 oz/100 gallons on these species.

TABLE 3: Tolerant Plants Listed by Common Name:

COMMON NAME	BOTANICAL NAME
Abelia	*Abelia spp.~~x grandiflora~~*
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	*Begonia spp.*
Birch, River	*Betula nigra*
Black-Eyed-Susan	*Rudbeckia hirta~~-fugida~~*
Blanket-Flower	*Gaillardia spp.*
Bougainvillea	*Bougainvillea spp.*
Boxwood	*Buxus sempervirens*
Buddleja	*Buddleja davidii*
Bugle	*Ajuga reptans*
Bugleweed	*Ajuga reptans*
Burning Bush	*Euonymus alatus~~altus~~*
Butterfly Bush	*Buddle~~j~~ia davidii ~~lochinch~~*
Cactus, Holiday	*Schlumbergera*
Caladium	*Caladium spp.*
Camellia	*Camellia japonica*
Carnation	*Dianthus caryophyllus*
Ceanothus	*Ceanothus spp.*
Cedar, Atlas	*Cedrus atlantica*
Cedar, Red	*Juniperus virginiana*
Cedar, White	*Cedrus spp.*
Cherry	*Prunus pumila*
Christmas Trees	See Fraser fir, Scotch pine and Douglas fir
Chrysanthemum	*Chrysanthemum ~~morifolium,~~ spp.*

COMMON NAME	BOTANICAL NAME
Clethra	*Clethra alnifolia*
Coleus	*Plectranthus spp.*
Cotoneaster, Creeping	*Cotoneaster adpressus*
Cotoneaster, Variegated Rockspray	*Cotoneaster horizontalis*
Crab apple (See Table 4 for variety list)	*Malus spp.*
Cranesbill	*Geranium spp.*
Crapemyrtle	*Lagerstroemia indica ~~x fauriei~~*
Cyclamen	*Cyclamen spp.*
Cyperus	*Cyperus spp.*
~~Cypress~~	~~*Chamaecyparis obtusa*~~
Cypress	*Chamaecyparis pisifera*
Cypress, Leyland	*Chamaecyparis spp.*
~~Daisy~~	~~*Bellis, Anthemis*~~
Daisy, Gerber	*Gerbera jamesonii*
Daisy, Transvaal	*Gerbera jamesonii*
Dogwood	*Cornus spp.*
Dogwood	*Cornus florida*
Dogwood, Pink	*Cornus spp.*
Dumb-Cane	*Dieffenbachia*
Euonymus, Dwarf Winged	*Euonymus alata*
Euonymus, Evergreen	*Euonymus japonicus*
Evergreen, Chinese	*Aglaonema spp.*
Fatsia, Japanese	*Fatsia japonica*
Fern, Leatherleaf	*Rumohra adiantiformis*
Fig	*Ficus spp.*
Fir, Douglas	*Pseudotsuga spp.*
Fir, Fraser	*Abies fraseri*
Floss-Flower	*Ageratum spp.*
Forsythia	*Forsythia viridissima*
Foxglove	*Digitalis spp.*
Gardenia	*Gardenia jasminoides*
Geranium	*Pelargonium spp.*

COMMON NAME	BOTANICAL NAME
Grass	*Pennisetum alopecuroides*
Grass, Dwarf Pampas	*Phalaris spp.*
Grass, Pampas	*Cortaderia selloana*
Hawthorn, Indian	*Rhaphiolepsis indica*
Heather	*Erica dareyensis*
Hemlock	*Tsuga spp.*
Hibiscus	*Hibiscus moscheutos*
Hibiscus	*Hibiscus rosa-sinensis*
Holly	*Ilex spp.*
Hosta	*Hosta spp.*
House-Leek	*Sempervivum spp.*
Hydrangea	*Hydrangea spp.*
Hydrangea, French	*Hydrangea macrophylla*
Impatiens[1]	*Impatiens spp.* [1]
Iris, African	*Dietes iridiodes*
Iris, Butterfly	*Dietes iridiodes*
Ivy, Algerian	*Hedera algeriensis*
Ivy, English	*Hedera helix*
Ivy, Swedish	*Plectranthus spp.*
Juniper	*Juniperus procumbens*
Juniper	*Juniperus scopulorum*
Juniper	*Juniperus spp.*
Laurel	*Laurus nobilis*
Laurel, Australian	*Pittosporum spp.*
Laurel, Japanese	*Aucuba japonica*
Lilac, California	*Ceanothus spp.*
Lilac, Wild	*Ceanothus sanguineus*
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*

COMMON NAME	BOTANICAL NAME
Maple, Sugar	*Acer saccharum*
Marigold	*Tagetes spp.*
Mock-Orange	*Pittosporum tobira*
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, Roebelin's	*Phoenix roebelenii*
Palm, Sago	*Caryota urens*
Pansy[1]	*Viola spp.* [1]
Paper-Plant	*Fatsia japonica*
Pear, Bradford's	*Pyrus calleryana*
Periwinkle	*Vinca spp.*
Petunia	*Petunia spp.*
Philodendron	*Philodendron spp.*
Phlox	*Phlox spp.*
~~Photinia~~	~~*Photinia x fraseri*~~
Photinia, Red-Tip	*Photinia glabra*
Pine	*Pinus spp.*
Pine, Black	*Pinus nigra*
Pine, Eastern White	*Pinus strobus*
Pine, Muhgo	*Pinus muhgo*
Pine, Scotch	*Pinus sylvestris*
Pink	*Dianthus spp.*
Plum, Flowering	*Prunus spp.*
Plum, Purple-Leaf	*Prunus spp.*
Poinsettia	*Euphorbia ~~pulcherrima~~ spp.*
Pothos	*Epipremnum spp.*
Primrose	*Primula spp.*

COMMON NAME	BOTANICAL NAME
~~Privet, Japanese~~	~~*Ligustrum japonicum*~~
Pussy's-Foot	*Ageratum spp.*
Redbud, Western	*Cercis occidentalis*
~~Redtop~~	~~*Photinia x fraseri*~~
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.*
Sagebrush	*Artemisia spp.*
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*
Viola	*Viola spp.*
White alder	*Clethora spp.*
Wiegela, Pink	*Wiegela florida*
Willow, Virginia	*Itea virginica*

COMMON NAME	BOTANICAL NAME
Winterberry	*Ilex spp.*
Wormwood	Artemisia spp.
Yaupon	*Ilex spp.*
Yew, Spreading	*Taxus baccata*
Yucca	*Yucca spp.*
Zebra-Plant	*Aphelandra spp.*
Zinnia	*Zinnia spp.*

[1] Do not exceed 2 oz/100 gallons on these species.

TABLE 4: Tolerant Varieties of Crabapple Species (Genus *Malus*):

Tolerant Varieties of *Malus*
Arkansas Black
atrosanguinea
baccata
baccata var. jackii
baccata var. mandshurica
Callaway
Candymint Sargent
Christmas Holly
coronaria
David
Dolgo
Donald Wyman
Dorothea
Doubloons
Eleyi
Enterprise
Evereste
Eyelynn
floribunda
Gloriosa
Golden Delicious
Golden Raindrops

Tolerant Varieties of *Malus*
Hopa
Indian Magic
Island
Katherine
Lancelot
Louisa
Mary Potter
Molten Lava
New Centennial
Ormiston Roy
Pink Satin
Prairie Maid
Prairifire
Profusion
pumila
Ralph Shay
Red Jade
Red Baron
Sargent
sargentii
seiboldii
Selkirk
Sentinel
Silver Moon
Silverdrift
Sinai Fire
spectablis
Sugar Tyme
Van Eseltine
White Angel
Williams Pride
Winter Gold
Yellow Delicious
zumi Calocarpa

Table 5: Intolerant Plants (Do not apply HERITAGE Fungicide to these species or varieties):

BOTANICAL NAME	COMMON NAME
Apple	*Malus domestica*
Crabapple - Flame variety	*Malus spp.*
Crabapple - Brandywine variety	*Malus spp.*
Crabapple - ~~Hopa~~ Novamac variety	*Malus spp.*
Cherry, Flowering - Yoshina variety	*Prunus yedoensis.*
Privet	*Ligustrum spp.*

CONIFERS INCLUDING CHRISTMAS TREES

HERITAGE may be used to control certain diseases on conifers in production (indoor and outdoor) and landscape situations.

DIRECTIONS FOR APPLICATION

Crop	Target Diseases	Use Rate oz product/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)	Integrated Pest (Disease) Management: HERITAGE 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 sprays of HERITAGE before alternating with a fungicide that has a different mode of action. Do not make more than eight applications of HERITAGE per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of disease development and continue throughout the season at 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates to improve coverage. Do not apply more than 4.0 pounds product/acre/season (2.0 lb. ai/A).

FRUIT AND NUT TREES IN NURSERIES AND LANDSCAPES

HERITAGE may be applied to fruit and nut trees in production nurseries and landscapes to control certain diseases. Follow the pre-harvest interval following applications prior to consuming fruits and nuts from those treated areas.

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Almonds	Alternaria leaf and fruit spot (*Alternaria alternata*) Anthracnose (*Colletotrichum acutatum*) Brown Rot Blossom Blight (*Monilinia laxa, M. fructicola*) Leaf Blight (*Seimatosporium lichenicola*) Leaf rust (*Tranzschelia discolor*) Scab (*Cladosporium carpophilum*) Shothole (*Wilsonomyces carpophilus*)	3.2-8.0 (0.10-0.25)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters and proper timing and placement of irrigation. Resistance Management: For blossom blight do not apply more than two sequential sprays of HERITAGE before alternating with a fungicide that has a different mode of action. For all other almond diseases do not apply more than four sequential sprays of HERITAGE before alternation with a fungicide that has a different mode of action. Do not make more than six applications of HERITAGE per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of 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 to improve coverage. For blossom blight begin applications at early bloom and continue through petal fall. For anthracnose, scab and shothole begin applications prior to disease development and continue at 10-14 day intervals throughout the season. Do not apply more than 3.0 pounds product/acre/season (1.5 lb. ai/A). Do not apply within 28 days of harvest.

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Pecans	Anthracnose (*Glomerella cingulata*) Scab (*Cladosporium carvigenum*)	3.2-6.4 (0.10-0.20)	Integrated Pest (Disease) Management: HERITAGE 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: Do not apply more than four sequential sprays of HERITAGE before alternation with a fungicide that has a different mode of action. Do not make more than six applications of HERITAGE per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates to improve coverage. Do not apply more than 2.4 pounds product/acre/season (1.2 lb ai/A). Do not apply within 45 days of harvest.

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Stone Fruit Apricot Cherry, sweet Cherry, tart Nectarine Peach Plum Plumcot Prune	Scab (*Cladosporium carpophilum*) Alternaria Spot and Fruit Rot (*Alternaria alternata*) Anthracnose (*Colletotrichum pruicola, C. gloeosporioides*) Leaf Rust (*Tranzschelia discolor*) Powdery Mildew (*Sphaerotheca pannosa, Podosphaera clandestina*) Shot Hole (*Wilsonomyces carpophilus*) Brown Rot Blossom blight and Fruit rot (*Monilinia fructicola, M. laxa*)	3.2-8.0 (0.1-0.25) 6.4-8.0 (0.2-0.25)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters and pruning to provide sunlight and aeration into the canopy. Resistance Management: For blossom blight do not apply more than two sequential sprays of HERITAGE before alternating with a fungicide that has a different mode of action. For all other diseases do not apply more than four sequential sprays of HERITAGE before alternation with a fungicide that has a different mode of action. Do not alternate or tank mix with fungicides to which resistance has developed in the pathogen population. Do not make more than six applications of HERITAGE per acre per year for all diseases. Do not make more than 4 applications of HERITAGE per acre per year at 8 oz product/A (0.25 lb ai/A). Application Directions: For brown rot blossom blight, - Begin applications at early bloom and continue through petal fall. Do not apply more than two applications of HERITAGE before alternating with fungicides that have a different mode of action. For brown rot on fruit, HERITAGE may be applied to fruit up to the day of harvest. Do not apply more than two applications before alternating with fungicides that have a different mode of action. For scab, begin applications at petal fall and continue at 7-14 day intervals. For all other diseases, begin application at the onset of disease as a protectant fungicide and continue on a 7-14 day schedule. For peaches only, 4.7-8.0 oz of HERITAGE may be used for scab control. Applications may be made by ground, air or chemigation Do not apply more than 2.4 pounds product/acre/season (1.2 lb ai/A). May be applied the day of harvest.

Crop	Target Diseases	Use Rate oz product/A (lb ai/A)	Remarks
Tree Nuts Almonds (see specific use instructions) Beechnut Brazil nut Butternut Cashew Chestnut Chinquapin Filbert Hickory Macadamia Pecan Walnut ~~Pistachios (see specific use instructions)~~	Alternaria leaf and fruit spot (*Alternaria alternata*) Anthracnose (*Colletotrichum acutatum, Glomerella cingulata*) Late blight (*Alternaria alternata*) Scab (*Cladosporium carpophilum*) Septoria leaf spot (*Septoria pistaciarum*) Shothole (*Wilsonomyces carpophilus*) Blossom Blight (*Monilinia laxa, M. fructicola*)	3.2-6.4 (0.10-0.20) 6.4 (0.20)	Integrated Pest (Disease) Management: HERITAGE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters and proper timing and placement of irrigation. Resistance Management: For blossom blight do not apply more than two sequential sprays of HERITAGE before alternating with a fungicide that has a different mode of action. For all other diseases do not apply more than four sequential sprays of HERITAGE before alternation with a fungicide that has a different mode of action. Do not make more than six applications of HERITAGE per acre per year. Application Directions: HERITAGE applications should begin prior to or in the early stages of 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 to improve coverage. For blossom blight begin applications at early bloom and continue through petal fall. For all other diseases begin applications prior to or in the early stages of disease development and continue at 7-21 day intervals throughout the season. Do not apply more than 2.4 pounds product/acre/season (1.2 LB ai/A). Do not apply within 45 days of harvest.

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