

# SPECIMEN

# Sercadis®

## Xemium® Brand Fungicide

**For disease control in the following crops: apple, rice, and sugarcane**

Powered by **Xemium® fungicide**

**Active Ingredient:**

fluxapyroxad\*: 1*H*-Pyrazole-4-carboxamide, 3-(difluoromethyl)-1-methyl-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)- . . . . . 26.55%

**Other Ingredients:** . . . . . 73.45%

**Total:** . . . . . 100.00%

\*Equivalent to 2.47 pounds of active ingredient per gallon

**EPA Reg. No. 7969-309**

**EPA Est. No.**

### **KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION**

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

See inside for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

**In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

### **Net Contents:**

## FIRST AID

### If swallowed

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- **DO NOT** induce vomiting unless told to do so by a poison control center or doctor.
- **DO NOT** give anything to an unconscious person.

## HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

## Precautionary Statements

### Hazards to Humans and Domestic Animals

**CAUTION.** Harmful if swallowed.

### Personal Protective Equipment (PPE)

#### Applicators and other handlers must wear:

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

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

### Engineering Controls

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

## USER SAFETY RECOMMENDATIONS

### Users should:

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

### Environmental Hazards

This pesticide is toxic to fish. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

**DO NOT** apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark, except as specified in this label for use in rice.

**DO NOT** apply where runoff is likely to occur. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate. Observe caution when spraying in the vicinity of aquatic areas such as lakes, reservoirs, rivers, permanent streams, marshes or natural ponds and estuaries.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater.

### Surface Water Advisory

This product is classified as having high potential for reaching aquatic sediment via runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this active ingredient or its degradates from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

### Groundwater Advisory

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

## Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. **DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

## AGRICULTURAL 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 **12 hours**.

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

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

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

### Pesticide Storage

Store in original containers only. Keep container closed when not in use. **DO NOT** store near food or feed.

### Pesticide Disposal

Wastes resulting from using this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representatives at the nearest EPA Regional Office for guidance.

### Container Handling

**Nonrefillable Container. DO NOT reuse or refill this container.** Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

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## STORAGE AND DISPOSAL (continued)

### Container Handling (continued)

#### Triple rinse containers small enough to shake

**(capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

#### Triple rinse containers too large to shake

**(capacity > 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

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

**Refillable Container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**Triple rinse as follows:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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## STORAGE AND DISPOSAL *(continued)*

### Container Handling *(continued)*

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

### In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

### Steps to be taken in case material is released or spilled:

- In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.
- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

## Product Information

Read the entire **Directions For Use** and **Conditions of Sale and Warranty** before using this product.

This package contains **Sercadis® Xemium® brand fungicide**, a suspension concentrate (SC) containing the active ingredient fluxapyroxad. The active ingredient in **Sercadis** belongs to the succinate-dehydrogenase (SDH) inhibitor class of fungicides. To maximize disease control, apply **Sercadis** in a regularly scheduled protection spray program and use in a rotation program with other fungicides.

Because of its high specific activity, **Sercadis** has good residual activity against target fungi. **Sercadis** is not for use in greenhouse or transplant production.

## Mode of Action

Fluxapyroxad, the active ingredient of **Sercadis**, belongs to the group of respiration inhibitors classified by the U.S. EPA and Canada PMRA as a target site of action **Group 7** fungicide.

## Resistance Management

**Sercadis** contains fluxapyroxad, a **Group 7** fungicide, and is effective against pathogens resistant to fungicides with modes of action different from those of target site **Group 7**, such as dicarboximides, sterol inhibitors, benzimidazoles, or phenylamides. Fungal isolates resistant to **Group 7** fungicides may eventually dominate the fungal population if **Group 7** fungicides are used predominantly and repeatedly in the same field in successive years as the primary method of control for the targeted pathogen species. This may result in reduction of disease control by **Sercadis** or other **Group 7** fungicides. To maintain the performance of **Sercadis** in the field, **DO NOT** exceed the specified number of sequential applications of **Sercadis** or the total number of applications of **Sercadis** per season stated in **Table 1. Sercadis® Xemium® brand fungicide Restrictions and Limitations Overview** and **Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions**. Adhere to the label instructions regarding the sequential use of **Sercadis** or other target site of action **Group 7** fungicides that have a similar site of action on the same pathogens.

## Resistance Management Advisory

The following recommendations may be considered to delay the development of fungicide resistance:

1. **Tank mixtures** – Use **Sercadis** in tank mixtures with fungicides from different target site of action groups that are registered/permitted for the same use and that are effective against the pathogens of concern. Use at least the minimum labeled rates of each fungicide in the tank mix. For tank mix exceptions, see **Additives and Tank Mixing Information** section and **Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions**.
2. **IPM** – Integrate **Sercadis** into an overall disease and pest management program. Follow cultural practices known to reduce disease development. Consult your local extension specialist, certified crop advisor and/or BASF representative for additional IPM strategies established for your area. **Sercadis** may be used in agricultural extension advisory (disease forecasting) programs, which recommend application timing based on environmental factors favorable for disease development.
3. **Monitoring** – Monitor efficacy of all fungicides used in the disease management program against the targeted pathogen and record other factors that may influence fungicide performance and/or disease development. If a **Group 7** target site fungicide such as **Sercadis** appears to be less or no longer effective against a pathogen that it previously controlled or suppressed,

contact a BASF representative, local extension specialist, or certified crop advisor for further investigation.

## Application Instructions

Apply specified rates of **Sercadis® Xemium® brand fungicide** as instructed in **Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions**. **Sercadis** can be applied by ground and aerial application. For best results, thorough coverage of plant materials is required. **Sercadis** can also be applied through sprinkler irrigation equipment, except for use in rice. Check equipment frequently for calibration.

Under low-level disease conditions, use the minimum application rates; use maximum application rates and shortened spray schedules for severe or threatening disease conditions.

### Cleaning Spray Equipment

Spraying equipment must be cleaned thoroughly before and after applying this product, particularly if a product with potential to injure crops was used prior to **Sercadis**.

### Ground Application

Apply **Sercadis** in sufficient water to ensure thorough coverage of foliage, bloom, and fruit. Thorough coverage is required for optimum disease control. For ground applications to rice, use no less than 15 gallons of spray solution per acre.

### Instructions for Directed or Banded Crop Sprays

The application rates shown in **Table 1. Sercadis® Xemium® brand fungicide Restrictions and Limitations Overview** and **Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions** on this label reflect the amount of product to be applied uniformly over an acre of ground on a broadcast basis. In some crops, **Sercadis** may be applied as a directed or banded spray over the rows or plant beds with the alleys or row middles left unsprayed. For such uses, reduce the rate of **Sercadis** in proportion to the area actually sprayed to avoid applying the product at use rates higher than permitted on this label.

To calculate the broadcast equivalent rate for directed or banded sprays:

sprayed bed width + unsprayed row middle width = total row width

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{band rate per acre}$$

**Example:** A directed spray application to 45-inch plant beds separated by 15 inches of unsprayed row middles:

45 inches band width + 15 inches unsprayed row middles = 60 inches row width

Uniformly apply the broadcast equivalent rate per acre. Calculate:

$$\frac{45 \text{ inches band width}}{60 \text{ inches row width}} \times 4.5 \text{ fl ozs per acre Sercadis} = 3.4 \text{ fl ozs per acre Sercadis}$$

### Aerial Application

For all crops listed in this label, aerial application can be made and thorough coverage is required for optimum disease control. Avoid application under conditions when uniform coverage cannot be obtained or when spray drift may occur.

#### For aerial applications:

- **Sugarcane** - Use no less than 5 gallons of spray solution per acre.
- **Rice** - Use no less than 7 gallons of spray solution per acre.
- **Apple** - Use no less than 10 gallons of spray solution per acre.

### Directions For Use Through Sprinkler Irrigation Systems

#### Sprayer Preparation

Clean chemical tank and injector system thoroughly. Flush system with clean water.

#### Application Instructions

Apply **Sercadis** at rates and timings as required in this label.

### Use Precautions for Sprinkler Irrigation Applications

- **DO NOT** apply by sprinkler irrigation to rice. For all other crops, this product can be applied 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.
- Add **Sercadis** to the pesticide supply tank containing sufficient water to maintain a continuous flow by the injection equipment. In continuous moving systems, inject this product-water mixture continuously, applying the labeled rate per acre for that crop. **DO NOT** exceed 1/2 inch (13,577 gallons) of water per acre. In stationary or noncontinuous moving systems, inject the product-water mixture in the last 15 to 30 minutes of each set allowing sufficient time for all of the required pesticide to be applied by all the sprinkler heads and applying the labeled rate per acre for that crop. **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 nonuniform distribution of treated water. Thorough coverage of foliage is required for good control. Maintain good agitation during the entire application period.
- Contact a state extension service specialist, equipment manufacturers or other experts for calibration questions.

- 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.
  - **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.
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.

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### Additives and Tank Mixing Information

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**Sercadis® Xemium® brand fungicide** can be tank mixed with most recommended fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives as specified in **Table 2**.

#### **Sercadis® Xemium® brand fungicide Crop-specific Directions.**

Under some conditions, the use of additives or adjuvants may improve the performance of **Sercadis**. However, all varieties and cultivars have not been tested with all possible tank mix combinations. Local conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, or crop injury may result from mixing **Sercadis** with other products. Therefore, before using any tank mix (fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives), test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

When an adjuvant is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

If tank mixtures are used, adhere to restrictions due to rates, label instructions and precautions on all labels.

#### **Compatibility Test for Tank Mix Components**

Add components in the following sequence using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre:

1. **Water** - For 100 gallons per acre spray volume, use 16 cups (1 gallon) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended source at the source temperature.
2. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspoemulsions) - Cap the jar and invert 10 cycles.
3. **Water-soluble products** - Cap the jar and invert 10 cycles.

### **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, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, 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. **Emulsifiable concentrates** (oil concentrate or methylated seed oil when applicable) - Cap the jar and invert 10 cycles.
5. **Water-soluble additives** - Cap the jar and invert 10 cycles.
6. Let the solution stand for 15 minutes.
7. **Evaluate** the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick (clabbered) texture. **DO NOT** use any spray solution that could clog spray nozzles.

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### Mixing Order

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1. **Water** - Begin by agitating a thoroughly clean sprayer tank 3/4 full of clean water.
2. **Agitation** - Maintain constant agitation throughout mixing and application.
3. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
4. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
5. **Water-dispersible products** (such as dry flowables, wettable powders, suspension concentrates including **Sercadis**, or suspo-emulsions)
6. **Water-soluble products**
7. **Emulsifiable concentrates** (such as oil concentrates when applicable)
8. **Water-soluble additives** (such as ammonium sulfate [AMS] or urea ammonium nitrate [UAN] when applicable)
9. **Remaining quantity of water**

Make sure that each component is thoroughly mixed and suspended before adding tank mix partners. Maintain constant agitation during application. See **Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions** for more details.

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### Restrictions and Limitations

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- **DO NOT** exceed the maximum product rate (fl ozs/A) per year, the maximum rate per application, or the total number of applications of **Sercadis** per season as stated in **Table 1. Sercadis® Xemium® brand fungicide Restrictions and Limitations Overview** and **Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions**. Preharvest interval (PHI) restrictions are also included in these tables.
- **DO NOT** use **Sercadis** in greenhouse or transplant production.
- **Crop Rotation Restriction** - The following crops may be planted immediately following the last application: barley, berries and small fruits, Brassica leafy vegetables, bulb vegetables, corn (all types), cotton, cucurbit vegetables, dried shelled peas and beans, edible-podded legume vegetables, fruiting vegetables, grapes, leafy vegetables, mint (spearmint and peppermint), non-grass animal feeds (forage, fodder, straw, and hay), oat, oilseed crops (including flax seed, rapeseed and sunflower), peanut, pome fruits, rice, root vegetables, rye, sorghum and millet, soybean, stone fruits, strawberries, succulent shelled peas and beans, sugar beet, sugarcane, tree nuts, tuberous and corm vegetables (including potato), wheat and triticale, and any other crop labeled for direct application of this product.  
  
For all other crops, **DO NOT** plant sooner than 365 days after the last application.
- **Sercadis** is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.

**Table 1. Sercadis® Xemium® brand fungicide Restrictions and Limitations Overview\***

Crop	Maximum Product Rate per Application (fl ozs/A)	Maximum Applications per Season**	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Apple</b>	4.5	4	18	0
<b>Rice</b>	6.8	2	13.6	28
<b>Sugarcane</b>	5.7	2	11.4	14
<p>*See <b>Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions</b> for additional directions.  **<b>DO NOT</b> make more than two (2) sequential applications of <b>Sercadis</b> before alternating to a labeled <b>non-Group 7</b> fungicide.</p>				



**Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Applications per Season	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Apple	Apple scab ( <i>Venturia inaequalis</i> )  Powdery mildew ( <i>Podosphaera leucotricha</i> )	3.5 to 4.5	4	18	0
	Alternaria blotch ( <i>Alternaria mali</i> )  Black rot/Frogeye leaf spot ( <i>Botryosphaeria obtusa</i> )  Flyspeck ( <i>Zygophiala jamaicensis</i> )  <b>Suppression only</b>  Cedar apple rust ( <i>Gymnosporangium juniperi-virginianae</i> )  Quince rust ( <i>Gymnosporangium clavipes</i> )	4.5			

**Application Directions.** For scab, powdery mildew, frogeye leafspot and rust, begin applications of **Sercadis** prior to disease development and continue on a 7 to 10 day interval.

For flyspeck, black rot, and Alternaria blotch, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval.

For improved control of scab and other diseases, combine **Sercadis** with a protectant fungicide registered for control of the target disease. Use of these tank mixes will also help to manage the development of fungicide resistance.

**Use of Adjuvants and Other Products as Mixes with Sercadis.**

The use of adjuvants or additives may improve the performance of **Sercadis** on apples. However, under certain conditions, mixtures of **Sercadis** with adjuvants, additives and/or other products may cause crop injury. Caution should be exercised if **Sercadis** is tank mixed with products formulated as emulsifiable concentrates (EC) or containing high amounts of solvents since injury may occur. Consult your local BASF representative for more information specific to your area.

**DO NOT** use **Sercadis** with:

- Crop oil concentrate (COC), methylated seed oil (MSO) adjuvants

BASF has not tested all varieties and cultivars with all possible tank mix combinations and rates of additives or adjuvants. Local environmental conditions also influence crop tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, crop injury, or incompatibility due to additives, adjuvants or other products used in combination with **Sercadis** may result from mixing **Sercadis** with other products. Refer also to the **Conditions of Sale and Warranty** section of this label.

To minimize the likelihood of crop injury, BASF recommends testing **Sercadis** in combination with other products for crop safety on a small portion of the crop. However, environmental variability precludes direct and consistent projection of small area test results to future use.

Consult a BASF representative for more information concerning additives or adjuvants.

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**Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions** (continued)

**Apple** (continued)

For aerial application to apple trees, use no less than 10 gallons of spray solution per acre.

No restriction on livestock grazing or feeding.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Sercadis** before alternating to a labeled **non-Group 7** fungicide. **DO NOT** apply more than four (4) applications of **Sercadis** per season.

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Applications per Season	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Rice</b> (including wild rice)	Aggregate sheath spot ( <i>Rhizoctonia oryzae-sativae</i> )  Sheath blight ( <i>Rhizoctonia solani</i> )	4.5 to 6.8	2	13.6	28

**Application Directions.** Begin applications of **Sercadis** at the first sign of disease. Repeat applications on 7 to 14 day intervals as needed if conditions for disease infection continue. Use the shorter interval and/or the higher rate when disease pressure is high.

**Sercadis** can be applied by ground sprayer or aerial equipment. For ground application, apply a minimum of 15 gpa (gallons per acre) spray solution. For aerial application, apply 7 to 10 gpa spray solution. **DO NOT** apply **Sercadis** through any type of irrigation system. Apply **Sercadis** with a non-ionic spray (NIS) adjuvant at 0.25% v/v. Under hot weather conditions apply **Sercadis** with 1% COC. BASF recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Sercadis** before alternating to a labeled **non-Group 7** fungicide.

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Applications per Season	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Sugarcane*</b>	Brown rust ( <i>Puccinia melanocephala</i> )  Orange rust ( <i>Puccinia kuehnii</i> )	5.7	2	11.4	14

**Application Directions.** Begin applications of **Sercadis** at the first sign of disease. Repeat applications on 14 to 28 day intervals as needed if conditions for rust infection continue. Use the shorter interval and/or the higher rate when disease pressure is high.

**Sercadis** can be applied by ground or air. When applying by air, **DO NOT** use less than 5 gallons of spray solution per acre.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** apply more than two (2) sequential applications of **Sercadis** before alternating to a labeled **non-Group 7** fungicide.

\*Not registered for use in California.

## Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, 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 weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

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007969-00309.20170404.**NVA 2017-04-370-0019**

Based on: NVA 2017-04-370-0012  
Supersedes: NVA 2014-04-370-0179

BASF Corporation  
26 Davis Drive  
Research Triangle Park, NC 27709



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