



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

January 13, 2017

Michelle Sharpe  
Product Registration Manager  
BASF Corporation  
P.O. Box 13528, 26 Davis Drive  
Research Triangle Park, NC 27709

Subject: Label Amendment – adding comprehensive adjuvant language and allowing for lower application rates to pome fruits for Apple Scab and Powdery Mildew  
Product Name: Sercadis Xemium Brand Fungicide  
EPA Registration Number: 7969-309  
Application Date: 8/5/2016  
Decision Number: 520237

Dear Michelle Sharpe:

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

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

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

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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EPA Reg. No. 7969-309  
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with FIFRA section 6. If you have any questions, please contact Nathan Mellor by phone at 703-347-8562, or via email at [mellor.nathan@epa.gov](mailto:mellor.nathan@epa.gov).



Shaja B. Joyner, Product Manager 20  
Fungicide-Herbicide Branch  
Registration Division 7505P

Enclosure



We create chemistry

Group **7** Fungicide

**ACCEPTED**  
01/13/2017  
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-309

# Sercadis®

## Xemium® Brand Fungicide

For disease control in the following crops: barley, berries and small fruits, Brassica leafy vegetables, bulb vegetables, citrus fruit, corn (all types), cotton, cucurbit vegetables, dried shelled peas and beans, edible-podded legume vegetables, fruiting vegetables, grapes, grass forage, fodder, straw, and hay, grass grown for seed, leafy vegetables, nongrass animal feed, 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

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:**

BASF Corporation  
26 Davis Drive, Research Triangle Park, NC 27709

## FIRST AID

<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li><li>• <b>DO NOT</b> give anything to an unconscious person.</li></ul>
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## 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.

**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.

## STORAGE AND DISPOSAL *(continued)*

### Container Handling *(continued)*

**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.

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.

*(continued)*

## 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.

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## 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/permited 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.

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## Application Instructions

Apply specified rates of **Sercadis** 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® Xemium® brand fungicide**.

## 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.
- **Tree crops** - Use no less than 10 gallons of spray solution per acre.
- **All other crops** - Use no less than 2 gallons of spray solution per acre. Thorough coverage is required for optimum disease control.

## Adjuvant or Crop Oil Use Limitations on Corn

Adjuvant crop damage can occur when an adjuvant or crop oil is used after the V8 stage and before the VT stage (the VT stage is defined as when the tassel's last branch is completely visible outside the whorl). If an adjuvant or crop oil is used after the V8 stage and before the VT stage, the grower and user are responsible for contacting the adjuvant source (adjuvant distributor, retailer, or manufacturer) for advice and confirmation that the adjuvant has been tested and proven to be safe for application from V8 to VT corn stage. Refer to adjuvant and/or crop oil labels for specific use directions and restrictions. Always follow the most restrictive label.

Another fungicide or an insecticide may be included in the tank mix if needed and labeled for use on corn. Refer to the tank mix pesticide product labels for specific use directions and restrictions. Always follow the most restrictive label.

## Spray Drift Management for Foliar Applications to Cotton

Use a medium to coarse spray droplet spectrum for aerial application to cotton.

Use a fine-to-medium/coarse spray droplet spectrum for ground applications to cotton.

**DO NOT** make applications when conditions favor drift beyond the target application area. When drift may be a problem, take measures to reduce drift, including:

1. **DO NOT** spray if wind speeds exceed 10 mph. If non-target crops are located downwind, use caution when spraying if wind is present.
2. Use caution when conditions are favorable for drift (high temperatures and or low relative humidity).
3. **DO NOT** apply when a temperature inversion exists. If inversion conditions are suspected, consult with local weather services before making an application.

For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used, and must not exceed 75% of the wingspan or rotor diameter. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure.

Spray should be released at the lowest possible height consistent with good pest control and flight safety.

(continued)

## Spray Drift Management for Foliar Applications to Cotton *(continued)*

Applications more than 10 feet above the crop canopy should be avoided. Make aerial or ground applications when wind velocity favors on-target product deposition (approximately 3 to 10 mph). **DO NOT** apply when wind velocity exceeds 10 mph. Avoid applications when wind gusts approach 10 mph. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of spray drift to aquatic areas. Avoid spraying during conditions of low humidity and/or high temperature. **DO NOT** make aerial or ground applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

## 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® Xemium® brand fungicide** 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.

## 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. 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.** See berries and small fruits subgroups, cucurbit vegetable group, fruiting vegetables group, grapes, and leafy vegetable group in **Table 2**.

**Sercadis® Xemium® brand fungicide Crop-specific Directions** for exceptions.

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.

### Adjuvant or Crop Oil Use Limitations on Corn

Adjuvant crop damage can occur when an adjuvant or crop oil is used after the V8 stage and before the VT stage (the VT stage is defined as when the tassel's last branch is

completely visible outside the whorl). If an adjuvant or crop oil is used after the V8 stage and before the VT stage, the grower and user are responsible for contacting the adjuvant source (adjuvant distributor, retailer, or manufacturer) for advice and confirmation that the adjuvant has been tested and proven to be safe for application from V8 to VT corn stage. Refer to adjuvant and/or crop oil labels for specific use directions and restrictions. Always follow the most restrictive label.

Another fungicide or an insecticide may be included in the tank mix if needed and labeled for use on corn. Refer to the tank mix pesticide product labels for specific use directions and restrictions. Always follow the most restrictive label.

### 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.
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\***

<b>Crop**</b>	<b>Maximum Product Rate per Application (fl ozs/A)</b>	<b>Maximum Applications per Season***</b>	<b>Maximum Product Rate per Year (fl ozs/A)</b>	<b>Minimum Time from Application to Harvest (PHI) (days)</b>
Barley	4.5	2	9	21
Berries and small fruits subgroups	9.1	3	27.3	0, 14
Brassica leafy vegetables group	4.6	3	13.8	3
Bulb vegetables group	9.1	3	27.3	7
Citrus fruit	6.3	4	25.2	0
Corn	4.5	2	9	21 7 (sweet)
Cotton	4.6	3	13.8	30
Cucurbit vegetables group	4.6	3	13.8	0
Dried shelled peas and beans (except soybeans)	4.5 (9 for dry beans only)	2	9 (18 for dry beans only)	21
Edible-podded legume vegetables	4.5	2	9	7
Fruiting vegetables group	4.6	3	13.8	0
Grapes – Botrytis disease	9.1	3	27.3	14
Grapes – all other diseases	4.5	6	27	14
Grass forage, fodder, straw, and hay	4.6	3	13.8	0
Grass grown for seed	4.6	3	13.8	0
Leafy vegetables group (except Brassica)	9.1	3	27.3	1
Nongrass animal feeds (including alfalfa and clover)	4.6	3	13.8	14
Oat	4.5	2	9	21
Oilseed crops	4.5	2	9	21
Peanut	4.5	3	13.5	7
Pome fruits group	4.5	4	18	0
Rice	6.8	2	13.6	28
Root vegetables (except sugar beet) subgroup	4.6	3	13.8	7
Rye	4.5	2	9	21
Sorghum and millet	4.6	2	9.2	21
Soybean	4.5	2	9	21
Stone fruits group	5.6	3	16.8	0
Strawberries	9.1	3	27.3	0
Succulent shelled peas and beans	4.5	2	9	7
Sugar beet	4.5	3	13.5	7
Sugarcane	5.7	3	11.4	14
Tree nuts group	5.7	3	17.1	14
Tuberous and corm vegetables subgroup	4.5	3	13.5	7
Wheat and triticale	4.5	2	9	21

\*See **Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions** for additional directions.

\*\*For a complete list of crops within a crop group, see **Table 2. Sercadis® Xemium® brand fungicide Crop-specific Directions**.

\*\*\***DO NOT** make more than two (2) sequential applications of **Sercadis** before alternating to a labeled **non-Group 7** fungicide.

**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)
<b>Barley</b>	Black point (Kernel blight or Head mold) <i>(Cochliobolus sativus, Alternaria spp.)</i>  Leaf rust <i>(Puccinia spp.)</i>  Net blotch <i>(Pyrenophora teres)</i>  Powdery mildew <i>(Blumeria graminis f. sp. hordei)</i>  Scald <i>(Rhynchosporium secalis)</i>  Septoria leaf and glume blotch <i>(Septoria spp., Stagonospora spp.)</i>  Spot blotch <i>(Cochliobolus sativus)</i>  Stem rust <i>(Puccinia graminis f. sp. tritici)</i>  Stripe rust <i>(Puccinia striiformis)</i>  Tan spot (Yellow leaf spot) <i>(Pyrenophora spp.)</i>	2.3 to 4.5	2	9	21

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development. Use higher rate when disease pressure is high. To maximize yields in cereals, it is important to protect the flag leaf. Apply **Sercadis** immediately after flag leaf emergence for optimum results.

**Sercadis** does not control Fusarium head blight (head scab) or prevent the reductions in grain quality that can result from this disease. When head blight is a concern, growers should manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

**DO NOT** harvest barley hay or feed green-chopped barley within 7 days of last application.

**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.

(continued)

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

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)
<p><b>Berries and small fruits subgroups*</b></p> <p><b>Bushberry subgroup</b></p> <p>Blueberry* (highbush and lowbush)</p> <p>Currant</p> <p>Elderberry</p> <p>Gooseberry</p> <p>Huckleberry</p> <p>Cultivars, varieties, and/or hybrids of these</p> <p><b>Caneberry subgroup</b></p> <p>Blackberry (all varieties)</p> <p>Loganberry</p> <p>Raspberry (black and red)</p> <p>Wild raspberry</p> <p>Cultivars, varieties, and/or hybrids of these</p>	<p>Alternaria leaf spot and fruit rot (<i>Alternaria</i> spp.)</p> <p>Leaf spot and blotch (<i>Mycosphaerella</i> spp., <i>Septoria</i> spp.)</p> <p>Phomopsis leaf spot, twig blight, and fruit rot (<i>Phomopsis</i> spp.)</p> <p>Powdery mildew (<i>Sphaerotheca</i> spp., <i>Microshaera</i> spp., <i>Oidium</i> spp.)</p> <p>Spur blight (<i>Didymella</i> spp., <i>Phoma</i> spp.)</p> <p><b>Suppression only</b></p> <p>Rust (<i>Pucciniastrum</i> spp., <i>Arthuriomyces</i> spp., <i>Phragmidium</i> spp., <i>Kuehneola</i> spp.)</p>	3.4 to 9.1	3	27.3	0 (bushberry, caneberry, and low growing berry)
<p><b>Low growing berry subgroup</b></p> <p>Bearberry</p> <p>Bilberry</p> <p>Cloudberry</p> <p>Cranberry</p> <p>Lingonberry</p> <p>Muntries</p> <p>Partridgeberry</p> <p>Cultivars, varieties, and/or hybrids of these</p>	<p>Botrytis gray mold (<i>Botrytis cinerea</i>)</p> <p>Monilinia blight and mummy berry (<i>Monilinia</i> spp.)</p>	4.6 to 9.1			
<p><b>Small fruit vine climbing subgroup, (except fuzzy kiwifruit)</b></p> <p>Amur river grape</p> <p>Gooseberry</p> <p>Kiwifruit, hardy</p> <p>Maypop</p> <p>Schisandra berry</p> <p>Cultivars, varieties, and/or hybrids of these</p>					14 (small fruit vine climbing)

*(continued)*

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

**Berries and small fruits subgroups\*** *(continued)*

**Application Directions.** Begin applications of **Sercadis** prior to onset of disease development and continue on a 7 to 14 day interval. Use the shorter interval and/or the higher rate when disease pressure is high.

**DO NOT** apply **Sercadis** to any crops in the berries and small fruits subgroups, including blueberries (highbush and lowbush), as a tank mix with any other pesticide products (including fungicides, insecticides, herbicides), adjuvants, liquid fertilizers, nutrients, any other additives, or anything other than water.

Mix **Sercadis** with water only for applications to crops listed in the berries and small fruits subgroups.

**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 three (3) applications of **Sercadis** per season.

\*Not registered for use in California.

*(continued)*

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

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)
<p><b>Brassica leafy vegetables group*</b></p> <p><b>Head and stem</b>                      Broccoli                      Broccoli, Chinese                      Brussels sprouts                      Cabbage                      Cabbage, Chinese                      Cabbage, Chinese mustard                      Cauliflower                      Cavalo broccolo                      Kohlrabi</p> <p><b>Leafy greens</b>                      Broccoli raab                      Chinese cabbage (bok choy)                      Collards                      Kale                      Mizuna                      Mustard greens                      Mustard spinach                      Rape greens</p>	<p>Alternaria leaf spot (<i>Alternaria</i> spp.)</p> <p>Black leg (<i>Phoma lingam</i>)</p> <p>Cercospora leaf spot (<i>Cercospora brassicicola</i>)</p> <p>Powdery mildew (<i>Erysiphe polygoni</i>)</p> <p>Rhizoctonia blight (<i>Rhizoctonia solani</i>)</p> <p>Ring spot (<i>Mycosphaerella brassicicola</i>)</p> <p>White leaf spot (<i>Pseudocercospora capsellae</i>)</p> <p><b>Suppression only</b></p> <p>Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)</p> <p>Southern blight (<i>Sclerotium rolfsii</i>)</p>	3.4 to 4.6	3	13.8	3
<p><b>Application Directions.</b> Begin applications of <b>Sercadis</b> prior to onset of disease development and continue on a 7 to 14 day interval.</p> <p>Use the shorter interval and/or the higher rate when disease pressure is high.</p> <p><b>Resistance Management.</b> To limit the potential for development of resistance, <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. <b>DO NOT</b> apply more than three (3) applications of <b>Sercadis</b> per season.</p> <p>*Not registered for use in California.</p>					

(continued)

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

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>Bulb vegetables group*</b> Chive, Chinese, fresh leaves Chive, fresh leaves Daylily, bulb Elegans hosta Fritillaria, bulb Fritillaria, leaves Garlic, bulb Garlic, great-headed, bulb Garlic, serpent, bulb Kurrat Lady's leek Leek Leek, wild Lily, bulb Onion, Beltsville bunching Onion, bulb Onion, Chinese, bulb Onion, fresh Onion, green Onion, macrostem Onion, pearl Onion, potato, bulb Onion, tree, tops Onion, Welsh, tops Shallot, bulb Shallot, fresh leaves Cultivars, varieties, and/or hybrids of these	Powdery mildew ( <i>Leveillula taurica</i> ) Purple blotch and leaf blight ( <i>Alternaria porri</i> ) Rust ( <i>Puccinia porri</i> ) Stemphylium leaf blight and stalk rot ( <i>Stemphylium vesicarium</i> )	3.4 to 9.1	3	27.3	7
	Botrytis leaf blight ( <i>Botrytis</i> spp.) Botrytis neck rot ( <i>Botrytis</i> spp.)	4.6 to 9.1			

**Application Directions.** Begin applications of **Sercadis** prior to onset of disease development and continue on a 7 to 14 day interval. Use the shorter interval and/or the higher rate when disease pressure is high.

**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 three (3) applications of **Sercadis** per season.

\*Not registered for use in California.

(continued)



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

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>Citrus fruit</b> Calamondin Chironja Citron Citrus hybrids Grapefruit Kumquat Lemon Lime Mediterranean mandarin Orange, sour Orange, sweet Pummelo Satsuma mandarin Tangelo Tangerine (mandarin) Tangor	Alternaria brown spot ( <i>Alternaria citri</i> ) Anthracnose ( <i>Colletotrichum acutatum</i> , <i>C. gloeosporioides</i> ) Black spot ( <i>Guignardia citricarpa</i> ) Greasy spot ( <i>Mycosphaerella citri</i> ) Melanose ( <i>Diaporthe citri</i> ) Scab ( <i>Elsinoe fawcettii</i> )	2.3 to 6.3	4	25.2	0

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 10 to 21 day interval. Use the higher rate and shorter interval when disease pressure is high.

No livestock feeding restrictions.

For aerial application to citrus orchards, **DO NOT** use less than 10 gallons of spray solution per acre.

**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.

*(continued)*

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

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>Corn</b> Field corn Pop corn Sweet corn Seed production corn	Eyespot <i>(Kabatiella zea)</i> Gray leaf spot <i>(Cercospora zea-maydis)</i> Northern corn leaf blight <i>(Exserohilum turcicum)</i> Northern corn leaf spot <i>(Cochliobolus carbonum)</i> Physoderma brown spot <i>(Physoderma maydis)</i> Rust, common <i>(Puccinia sorghi)</i> Rust, southern <i>(Puccinia polyspora)</i> Southern corn leaf blight <i>(Bipolaris maydis)</i> Yellow leaf blight <i>(Phyllosticta maydis)</i>	2.3 to 4.5	2	9	21 (7 sweet corn only)

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval if conditions are conducive for disease development. For aerial application directions to corn refer to the **Adjuvant or Crop Oil Use Limitations on Corn** section.

**Sercadis** may be used with adjuvants. See the **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

**Adjuvant or Crop Oil Use Limitations on Corn.** Adjuvant crop damage can occur when an adjuvant or crop oil is used after the V8 stage and before the VT stage (the VT stage is defined as when the tassel's last branch is completely visible outside the whorl). If an adjuvant or crop oil is used after the V8 stage and before the VT stage, the grower and user are responsible for contacting the adjuvant source (adjuvant distributor, retailer, or manufacturer) for advice and confirmation that the adjuvant has been tested and proven to be safe for application from V8 to VT corn stage. Refer to adjuvant and/or crop oil labels for specific use directions and restrictions. Always follow the most restrictive label.

Another fungicide or an insecticide may be included in the tank mix if needed and labeled for use on corn. Refer to the tank mix pesticide product labels for specific use directions and restrictions. Always follow the most restrictive label.

**DO NOT** harvest for forage within 7 days of last application.

**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.

*(continued)*

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

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>Cotton**</b>	Alternaria leaf spot, boll rot <i>(Alternaria spp.)</i> Ascochyta blight, boll rot <i>(Ascochyta spp.)</i> Cercospora blight and leaf spot <i>(Cercospora spp.)</i> Diplodia boll rot <i>(Diplodia spp.)</i> Phoma blight, boll rot <i>(Phoma spp.)</i> Rust <i>(Puccinia spp., Phykopsora spp.)</i> Stemphyllium leaf spot <i>(Stemphyllium spp.)</i> Target spot and Corynespora leaf spot <i>(Corynespora cassiicola)</i>	2.3 to 4.6	3*	13.8	30

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 day interval. Use the higher rate when disease pressure is high.

No livestock grazing or feeding restrictions.

**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.

\*When spraying in the vicinity of aquatic areas such a lakes, reservoirs, rivers, permanent streams, marshes or natural ponds and estuaries, **DO NOT** exceed two (2) aerial applications per year.

\*\*Not registered for use in California.

*(continued)*

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

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)
<p><b>Cucurbit vegetables group*</b></p> <p>Chayote</p> <p>Chinese waxgourd</p> <p>Citron melon</p> <p>Cucumber</p> <p>Gherkin</p> <p>Pumpkin</p> <p>Watermelon</p> <p><b>Edible gourd</b></p> <p>Chinese okra</p> <p>Cucuzza</p> <p>Hyotan</p> <p><b>Momordica spp.</b></p> <p>Balsam apple</p> <p>Balsam pear</p> <p>Bitter melon</p> <p>Chinese cucumber</p> <p><b>Muskmelon</b></p> <p>Cantaloupe</p> <p>Casaba</p> <p>Crenshaw melon</p> <p>Golden pershaw melon</p> <p>Honeydew melon</p> <p>Honey balls</p> <p>Mango melon</p> <p>Persian melon</p> <p>Pineapple melon</p> <p>Santaclaus melon</p> <p>Snake melon</p> <p><b>Summer squash</b></p> <p>Crookneck squash</p> <p>Scallop squash</p> <p>Straightneck squash</p> <p>Vegetable marrow</p> <p>Zucchini</p> <p><b>Winter squash</b></p> <p>Acorn squash</p> <p>Butternut squash</p> <p>Calabaza</p> <p>Hubbard squash</p> <p>Spaghetti squash</p>	<p>Alternaria leaf blight (<i>Alternaria cucumerina</i>)</p> <p>Powdery mildew (<i>Podosphaera</i> spp., <i>Sphaerotheca</i> spp., <i>Erysiphe</i> spp.)</p> <p>Cercospora leaf spot (<i>Cercospora citrulina</i>)</p> <p>Gummy stem blight (<i>Didymella bryoniae</i>)</p> <p>Microdochium blight (<i>Plectosporium tabacinum</i>)</p> <p>Target leaf spot (<i>Corynespora cassicola</i>)</p>	<p>3.4 to 4.6</p> <p>4.6</p>	<p>3</p>	<p>13.8</p>	<p>0</p>

*(continued)*

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

**Cucurbit vegetables group\*** *(continued)*

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

**DO NOT** apply **Sercadis** to any crops in the cucurbit vegetable group as a tank mix with any other pesticide products (including fungicides, insecticides, herbicides), adjuvants, liquid fertilizers, nutrients, any other additives, or anything other than water. See **Resistance Management** section below for tank mix exception for gummy stem blight resistance.

Mix **Sercadis** with water only for applications to crops listed in the cucurbit vegetable group.

**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. In areas where gummy stem blight resistance to **Group 7** fungicides have been confirmed, tank mix with chlorothalonil at full label rates and adhering to all label precautions. **DO NOT** apply more than three (3) applications of **Sercadis** per season.

\*Not registered for use in California.

*(continued)*

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

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)
<p><b>Dried shelled peas and beans (except soybeans)</b></p> <p>Broad bean</p> <p>Chickpea (garbanzo bean)</p> <p>Guar</p> <p>Lablab bean</p> <p>Lentils</p> <p>Pigeon pea</p> <p><i>Lupinus spp.</i></p> <p>Grain lupin</p> <p>Sweet lupin</p> <p>White lupin</p> <p><i>Phaseolus spp.</i></p> <p>Field bean</p> <p>Kidney bean</p> <p>Lima bean</p> <p>Navy bean</p> <p>Pink bean</p> <p>Pinto bean</p> <p>Tepary bean</p> <p><i>Pisum spp.</i></p> <p>Field pea</p> <p><i>Vigna spp.</i></p> <p>Adzuki bean</p> <p>Blackeyed pea</p> <p>Catjang</p> <p>Cowpea</p> <p>Crowder pea</p> <p>Moth bean</p> <p>Mung bean</p> <p>Rice bean</p> <p>Southern pea</p> <p>Urd bean</p>	<p>Alternaria leaf and pod spot (<i>Alternaria spp.</i>)</p> <p>Ascochyta blight (<i>Phoma exigua</i>, <i>Ascochyta spp.</i>)</p> <p>Botrytis gray mold (<i>Botrytis cinerea</i>)</p> <p>Cercospora leaf spot (<i>Cercospora spp.</i>)</p> <p>Mycosphaerella blight (<i>Mycosphaerella spp.</i>)</p> <p>Powdery mildew (<i>Erysiphe polygoni</i>)</p> <p>Rust (<i>Uromyces appendiculatus</i>)</p> <p>White mold (<i>Sclerotinia sclerotiorum</i>)</p>	<p>4.5 (up to 9 for dry beans only)</p>	<p>2</p>	<p>9 (up to 18 for dry beans only)</p>	<p>21</p>

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval if conditions are conducive for disease development or at the beginning of flowering.

Ascochyta blight in chickpeas and lentils develops quickly once established, so early detection and application is essential to reduce losses.

Bean forage, bean hay, pea vines, and pea hay may be fed no sooner than 7 days after last application.

*(continued)*

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

**Dried shelled peas and beans (except soybeans)** *(continued)*

**Use of adjuvants.** The use of additives or adjuvants may improve the performance of **Sercadis** on dried shelled peas and beans (legumes). However, BASF evaluations also indicate that under some conditions (particularly high temperatures and/or high additive rates), application of **Sercadis** in combination with certain rates of silicone-based or oil-containing (petroleum or crop) additives or adjuvants can cause injury to some legume crops.

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.

**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.

*(continued)*

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

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>Edible-podded legume vegetables</b>	Alternaria leaf and pod spot ( <i>Alternaria</i> spp.)	4.5	2	9	7
Jack bean	Ascochyta blight ( <i>Phoma exigua</i> , <i>Ascochyta</i> spp.)				
Pigeon pea					
Soybean (immature seed)					
Sword bean	Botrytis gray mold ( <i>Botrytis cinerea</i> )				
<i>Phaseolus</i> spp.					
Runner bean	Cercospora leaf spot ( <i>Cercospora</i> spp.)				
Snap bean					
Wax bean	Mycosphaerella blight ( <i>Mycosphaerella</i> spp.)				
<i>Pisum</i> spp.					
Dwarf pea	Powdery mildew ( <i>Erysiphe polygoni</i> )				
Edible-podded pea					
Snowpea	Rust ( <i>Uromyces appendiculatus</i> )				
Sugar snap pea					
<i>Vigna</i> spp.					
Asparagus bean	White mold ( <i>Sclerotinia sclerotiorum</i> )				
Chinese longbean					
Moth bean					
Yardlong bean					

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval if conditions are conducive for disease development.

Bean forage, bean hay, pea vines, and pea hay may be fed no sooner than 7 days after last application.

**Use of adjuvants.** The use of additives or adjuvants may improve the performance of **Sercadis** on legumes. However, BASF evaluations also indicate that under some conditions (particularly high temperatures and/or high additive rates), application of **Sercadis** in combination with certain rates of silicone-based or oil-containing (petroleum or crop) additives or adjuvants can cause injury to some legume crops.

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.

**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.

*(continued)*



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

<b>Crop</b>	<b>Target Disease</b>	<b>Product Rate per Application</b> (fl ozs/A)	<b>Maximum Applications per Season</b>	<b>Maximum Product Rate per Year</b> (fl ozs/A)	<b>Minimum Time from Application to Harvest</b> (PHI) (days)
<b>Fruiting vegetables group</b> Eggplant Ground cherry Pepino Pepper (all varieties) Tomatillo Tomato	Black mold <i>(Alternaria alternata)</i>	4.6	3	13.8	0
		or			
	Early blight <i>(Alternaria solani)</i>	4.6 fl ozs per 100 gallons of spray volume (dilute)*			
	Powdery mildew <i>(Leveillula taurica)</i>				
	Septoria leaf spot <i>(Septoria lycopersici)</i>				
	Target spot <i>(Corynespora cassicola)</i>				
	White mold <i>(Sclerotinia sclerotiorum)</i>				
	<b>Suppression only</b>				
	Botrytis gray mold <i>(Botrytis cinerea)</i>				

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

Applications using drip irrigation systems may provide disease suppression. The level and consistency of suppression from drip line applications varies with the soil type, level of inoculum, irrigation volumes, environment and other factors. See your local BASF representative for details on drip irrigation use in your area.

\*For applications based on dilute volume, plants should be sprayed to runoff. Apply a minimum of 20 gallons of spray volume per acre, and increase the spray volume as the plants grow during the season. Spray volume should be proportional to the amount of plant tissue to be covered such that 100 gallons of spray per acre is used on mature plants.

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

**Sercadis** can be used with nonionic surfactants at their lowest label rate up to 0.125%. When **Sercadis** is mixed with buffering agents and foliar nutrients, the pH of the final spray solution must be greater than 5.5.

**DO NOT** mix **Sercadis** with the following products:

- Emulsifiable concentrate (EC) formulation or solvent-based formulation products.
- Crop oil concentrate (COC), methylated seed oil (MSO), organosilicone (OS) or MSO/OS blended adjuvant products.

For **Sercadis** applications to **fresh market tomatoes** at less than 20 gallons per acre, **DO NOT** mix **Sercadis** with any other products, adjuvants, additives, nutrients or anything other than water.

**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 three (3) applications of **Sercadis** per season.

*(continued)*

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

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>Grapes</b>	Powdery mildew ( <i>Erysiphe necator</i> )	2.0 to 4.5	6	27	14
	Black rot ( <i>Guignardia bidwellii</i> )	4.5			
	Botrytis gray mold ( <i>Botrytis cinerea</i> )	4.5 to 9.1	3	27.3	
	<b>Aids in control:</b> Summer bunch rot ( <i>Aspergillus</i> spp., <i>Alternaria</i> spp., <i>Botrytis</i> spp., <i>Cladosporium</i> spp., <i>Penicillium</i> spp., <i>Rhizopus</i> spp.)				

**Application Directions. For powdery mildew control,** begin applications of **Sercadis** as of bud break or prior to onset of disease. When using the lower rate, continue on a 10 to 14 day interval. Longer spray intervals for powdery mildew control may be possible with higher rates of **Sercadis**. The effectiveness of longer spray intervals will depend on the current powdery mildew infection level in the field, the amount of disease pressure after application and factors such as crop growth stage and rate of growth.

**For black rot control,** begin applications of **Sercadis** before pre-bloom and continue on a 10 to 14 day interval.

Begin applications targeted against **Botrytis gray mold** prior to disease development when conditions favor disease development during early bloom, bunch preclosure and veraison. Use the higher rates from bunch preclosure to veraison. Use shorter intervals when disease pressure is high.

**For all other diseases listed,** begin applications of **Sercadis** prior to onset of disease development and continue on a 10 to 14 day interval. Use the higher rate and shorter interval when disease pressure is high.

**DO NOT** apply **Sercadis** to grapes as a tank mix with any other pesticide products (including fungicides, insecticides, herbicides), adjuvants, liquid fertilizers, nutrients, any other additives, or anything other than water.

Mix **Sercadis** with water only for application to grapes.

**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.

(continued)

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

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)
Grass forage, fodder, straw, and hay	Powdery mildew ( <i>Erysiphe</i> spp.) Rust ( <i>Puccinia</i> spp.)	2.3 to 4.6	3	13.8	0

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 14 to 21 day interval. Use the higher rate and shorter interval when disease pressure is high.

**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 three (3) applications of **Sercadis** per season.

*(continued)*

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

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)
Grass grown for seed	Powdery mildew ( <i>Erysiphe graminis</i> ) Rust ( <i>Puccinia recondita</i> , <i>P. graminis</i> )	2.3 to 4.6	3	13.8	0

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 14 to 21 day interval. Use the higher rate and shorter interval when disease pressure is high.

**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 three (3) applications of **Sercadis** per season.

*(continued)*

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

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>Leafy vegetables group* (except Brassica)</b> Amaranth Arugula Cardoon Celery Celery, Chinese Celtuce Chervil Chrysanthemum (edible-leaved and garland) Corn salad Cress (garden and Upland) Dandelion Dock Endive Fennel, Florence Lettuce (head and leaf) Orach Parsley Purslane (garden and winter) Radicchio (red chicory) Rhubarb Spinach Spinach (New Zealand and vine) Swiss chard	Alternaria leaf spot ( <i>Alternaria</i> spp.) Ascochyta leaf spot ( <i>Ascochyta</i> spp.) Cercospora leaf spot ( <i>Cercospora</i> spp.) Phoma ( <i>Phoma</i> spp.) Powdery mildew ( <i>Erysiphe</i> spp., <i>Phyllactinia</i> spp., <i>Sphaerotheca</i> spp.) Rust ( <i>Puccinia</i> spp., <i>Uromyces</i> spp.) Septoria leaf spot ( <i>Septoria</i> spp.)	3.4 to 9.1	3	27.3	1
Botrytis rot ( <i>Botrytis</i> spp.) Lettuce drop caused by <i>Sclerotinia minor</i> <b>Suppression only</b> Lettuce drop caused by <i>Sclerotinia sclerotiorum</i>	4.6 to 9.1				

*(continued)*

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

**Leafy vegetables group\* (except Brassica)** *(continued)*

**Application Directions.** Begin applications of **Sercadis** prior to onset of disease development and continue on a 7 to 14 day interval. Use the shorter interval and/or the higher rate when disease pressure is high.

**Tank Mix Restrictions**

**Spinach (all varieties).** **DO NOT** apply **Sercadis** to spinach as a tank mix with any other pesticide products (including fungicides, insecticides, herbicides), adjuvants, liquid fertilizers, nutrients, any other additives, or anything other than water.

Mix **Sercadis** with water only for applications to spinach (all varieties).

**Leafy vegetables (except spinach).** It is impossible for BASF to test all varieties of leafy vegetables for sensitivity to **Sercadis** under all environments and all potential product mixture combinations. Local conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. Proceed with caution with regard to **Sercadis** use, particularly in tank mixes and/or adjuvant combinations on leafy vegetables. To reduce the risk of leafy vegetable injury, BASF recommends testing **Sercadis** or **Sercadis** tank mixtures on a small portion of the crop before broadscale use.

To the extent consistent with applicable law, the user assumes all risks associated with adding products to the **Sercadis** spray solution. Refer also to the **Conditions of Sale and Warranty** section of this label.

**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 three (3) applications of **Sercadis** per season.

\*Not registered for use in California.

*(continued)*

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

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)
<p><b>Nongrass animal feeds (forage, fodder, straw, and hay)</b></p> <p>For pure and mixed strands of the following, or stands mixed with grasses:</p> <p>Alfalfa                      Bean, velvet                      Clover                      Kudzu                      Lespedeza                      Lupin                      Sainfoin                      Trefoil                      Vetch                      Vetch, crown                      Vetch, milk</p>	<p>Common leaf spot (<i>Pseudopezizza medicaginis</i>)</p> <p>Leaf spot (<i>Leptosphaerulina briosiani</i>)</p> <p>Powdery mildew (<i>Erysiphe</i> spp.)</p> <p>Rhizoctonia blight/black patch (<i>Rhizoctonia</i> spp.)</p> <p>Rust (<i>Phakopsora</i> spp., <i>Puccinia</i> spp., <i>Uromyces</i> spp.)</p> <p>Spring black stem and leaf spot (<i>Phoma medicaginis</i>)</p> <p>Stagnospora leaf spot (<i>Stagnospora melloti</i>)</p> <p>Stemphylium leaf spot (<i>Stemphylium</i> spp.)</p> <p>Summer black stem and leaf spot (<i>Cercospora medicaginis</i>)</p> <p>Yellow leaf blotch (<i>Leptotrichila medicaginis</i>)</p>	2.3 to 4.6	3	13.8	14

**Application Directions.** Begin applications of **Sercadis** prior to onset of disease development and continue on a 14 to 21 day interval. Use the higher rate and shorter interval when disease pressure is high.

**DO NOT** apply within 14 days of grazing or harvest for forage and hay.

**DO NOT** use on rangeland.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) **Sercadis** applications per cutting or three (3) **Sercadis** applications per calendar year (season).

*(continued)*

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

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>Oat</b>	Crown rust <i>(Puccinia coronata)</i> Helminthosporium leaf spot <i>(Dreschlera avenae)</i> Leaf blotch <i>(Pyrenophora avenae)</i> Leaf rust <i>(Puccinia spp.)</i> Septoria blotch and stem rot <i>(Septoria spp., Phaeosphaeria spp., Stagonospora spp.)</i> Spot blotch <i>(Bipolaris spp.)</i> Stem rust <i>(Puccinia graminis)</i>	2.3 to 4.5	2	9	21

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development. To maximize yields in cereals, it is important to protect the flag leaf. Apply **Sercadis** immediately after flag leaf emergence for optimum results.

**Sercadis** does not control Fusarium head blight (head scab) or prevent the reductions in grain quality that can result from this disease. When head blight is a concern, growers should manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

**DO NOT** harvest oat hay or feed green-chopped oats within 7 days of last application.

**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.

*(continued)*



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

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)
Oilseed crops Flax seed	PasmO <i>(Septoria linicola)</i>	2.3 to 4.5	2	9	21
Rapeseed (cultivars, varieties, and/or hybrids, including canola and crambe)	Blackleg <i>(Leptosphaeria maculans)</i> Blackspot <i>(Alternaria spp.)</i>	2.3 to 4.5			
	White mold/Sclerotinia stem rot <i>(Sclerotinia sclerotiorum)</i>	4.5			
Sunflower	Alternaria leaf spot <i>(Alternaria spp.)</i> Cercospora leaf spot <i>(Cercospora helianthi)</i> Powdery mildew <i>(Erysiphe cichoracearum)</i> Rust <i>(Puccinia helianthi, Uromyces spp.)</i> Sclerotinia head blight <i>(Sclerotinia sclerotiorum)</i> Septoria leaf spot <i>(Septoria spp.)</i>	2.3 to 4.5			

*(continued)*

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

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>Oilseed crops</b> <i>(continued)</i> Borage Castor oil plant Chinese tallowtree Crambe Cuphea Echium Euphorbia Evening primrose Gold of pleasure (camelina) Hare's ear mustard Jojoba Lesquerella Lunaria Meadowfoam Milkweed Mustard seed Niger seed Oil radish Poppy seed Rose hip Safflower Sesame Stokes aster Sweet rocket Tallowwood Tea oil plant Vernonia	<i>Alternaria</i> spp. <i>Septoria</i> spp. <i>Sclerotinia</i> spp.	2.3 to 4.5	2	9	21

**Application Directions for Rapeseed.** For the control of blackleg, apply **Sercadis** at the 2 to 4 leaf stage. For optimal control of blackspot, apply **Sercadis** at early pod development. For control of *Sclerotinia*, apply **Sercadis** at 20% to 50% flowering or prior to the onset of disease. A second application may be made 14 days later if weather conditions are favorable for disease development.

**Application Directions for Other Oilseed Crops.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

No livestock feeding restrictions.

**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.

*(continued)*

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

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)
Peanut	Pepper spot <i>(Leptosphaerulina crassiasca)</i> Rust <i>(Puccinia arachidis)</i> Web blotch <i>(Phoma arachidicola)</i>	2.3 to 4.5	3	13.5	7
	Rhizoctonia limb rot, Peg rot and Pod rot <i>(Rhizoctonia solani)</i> Sclerotinia blight <i>(Sclerotinia minor)</i> <b>Suppression only</b> Sclerotium rot - Southern stem rot, Southern blight and White mold <i>(Sclerotium rolfsii)</i> Cylindrocladium black rot <i>(Cylindrocladium parasiticum)</i>	4.5			

**Application Directions.** For control of pepper spot, rust and web blotch, begin applications of **Sercadis** prior to disease development and continue on a 14 to 21 day interval.

For control of Rhizoctonia and Sclerotium, begin applications of **Sercadis** prior to disease development and continue on a 14 to 28 day interval.

Use the higher rate and/or shorter spray interval when disease pressure is high or in fields with a history of disease.

Peanut meal may be fed. **DO NOT** graze or harvest for forage use.

**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 three (3) applications of **Sercadis** per season.

*(continued)*

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

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>Pome fruits group</b> Apple Crabapple Loquat Mayhaw Oriental pear Pear Quince	Apple scab <i>(Venturia inaequalis)</i>	3.5 to 4.5	4	18	0
	Powdery mildew <i>(Podosphaera leucotricha)</i> Alternaria blotch <i>(Alternaria mali)</i> Bitter rot <i>(Colletotrichum spp.)</i> Black rot/Frogeye leaf spot <i>(Botryosphaeria obtusa)</i> Brooks spot <i>(Mycosphaerella pomi)</i> Flyspeck <i>(Zygophiala jamaicensis)</i> Pear scab <i>(Venturia pirina)</i> Sooty blotch (disease complex) White rot <i>(Botryosphaeria dothidea)</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 sooty blotch, flyspeck, white rot, black rot, bitter 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 pome fruits. 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.

*(continued)*

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

**Pome fruits group** *(continued)*

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

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

For **pears**, **DO NOT** use **Sercadis** with horticultural mineral oil as crop response to foliage and/or fruit can occur under certain conditions.

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.

For aerial application to pome fruit 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.

*(continued)*

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

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)
Rice (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.

*(continued)*

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

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>Root vegetables (except sugar beet) subgroup*</b> Beet, garden Burdock, edible Carrot Celeriac Chervil, turnip-rooted Chicory Ginseng Horseradish Parsley, turnip-rooted Parsnip Radish Radish, Oriental Rutabaga Salsify Salsify, black Salsify, Spanish Skirret Turnip	Alternaria leaf spot/blight ( <i>Alternaria</i> spp.)	3.4 to 4.6	3	13.8	7
	Powdery mildew ( <i>Erysiphe</i> spp., <i>Leveillula</i> spp.) <hr/> Cercospora leaf spot/blight ( <i>Cercospora</i> spp.) <b>Suppression only</b> Sclerotinia white mold/cottony rot ( <i>Sclerotinia sclerotiorum</i> ) Southern blight ( <i>Sclerotium rolfsii</i> )	4.6			

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

**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 three (3) applications of **Sercadis** per season.

\*Not registered for use in California.

(continued)

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

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>Rye</b>	Black point (Kernel blight or Head mold) <i>(Cochliobolus sativus, Alternaria spp.)</i>  Leaf rust <i>(Puccinia spp.)</i>  Powdery mildew <i>(Blumeria graminis f. sp. secalis)</i>  Scald <i>(Rhynchosporium secalis)</i>  Septoria leaf and glume blotch <i>(Septoria spp., Stagonospora spp.)</i>  Spot blotch <i>(Cochliobolus sativus)</i>  Stem rust <i>(Puccinia graminis f. sp. tritici)</i>  Stripe rust <i>(Puccinia striiformis)</i>  Tan spot (Yellow leaf spot) <i>(Pyrenophora spp.)</i>	2.3 to 4.5	2	9	21

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development. Use higher rate when disease pressure is high. To maximize yields in cereals, it is important to protect the flag leaf. Apply **Sercadis** immediately after flag leaf emergence for optimum results.

**Sercadis** does not control Fusarium head blight (head scab) or prevent the reductions in grain quality that can result from this disease. When head blight is a concern, growers should manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

**DO NOT** harvest rye hay or feed green-chopped rye within 7 days of last application.

**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.

*(continued)*



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

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>Sorghum*</b> Milo*  <b>Millet*</b> (pearl and proso)	Gray leaf spot and Cercospora leaf spot ( <i>Cercospora</i> spp.)  Northern leaf blight ( <i>Exserohilum turcicum</i> )  Rust ( <i>Puccinia</i> spp.)  Southern leaf blight and Bipolaris leaf spot ( <i>Bipolaris</i> spp.)	3.4 to 4.6	2	9.2	21

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development. Use the higher rate when disease pressure is high.

**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 **non-Group 7** fungicide.

\*Not registered for use in California.

*(continued)*

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

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)
Soybean	Alternaria leaf spot ( <i>Alternaria</i> spp.) Brown spot ( <i>Septoria glycines</i> ) Cercospora blight ( <i>Cercospora kikuchii</i> ) Frogeye leaf spot ( <i>Cercospora sojina</i> ) Pod and stem blight ( <i>Diaporthe phaseolorum</i> ) Rhizoctonia aerial blight ( <i>Rhizoctonia solani</i> )	2.3 to 4.5	2	9	21
	<b>Suppression only</b> Southern blight ( <i>Sclerotium rolfsii</i> )	4.5			

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval if conditions are conducive for disease development. Use the higher rate when disease pressure is high.

**Sercadis** may be used with adjuvants. See the **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

Soybean forage may be fed no sooner than 7 days after last application. Soybean hay may be fed no sooner than 14 days after last treatment.

**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.

*(continued)*

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

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>Stone fruits group</b> Apricot Apricot, Japanese Capulin Cherry, black Cherry, Nanking Cherry, sweet Cherry, tart Jujube, Chinese Nectarine Peach Plum Plum, American Plum, beach Plum, Canada Plum, cherry Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Klamath Plum, prune Plumcot Sloe Cultivars, varieties, and/or hybrids of these	Alternaria leaf spot ( <i>Alternaria</i> spp.) Blossom blight ( <i>Monilinia</i> spp.) Blue Mold ( <i>Penicillium</i> spp.) Brown rot ( <i>Monilinia</i> spp.) Gray Mold ( <i>Botrytis</i> spp.) Leaf spot ( <i>Blumeriella jaapii</i> ) Powdery mildew ( <i>Sphaerotheca</i> spp., <i>Podosphaera</i> spp.) Ripe fruit rot ( <i>Monilinia fruticola</i> , <i>Monilinia laxa</i> , <i>Botrytis cinerea</i> , <i>Rhizopus</i> spp.) Rust ( <i>Tranzschelia discolor</i> ) Scab ( <i>Cladosporium carpophilum</i> ) Shothole ( <i>Wilsonomyces carpophilus</i> )	5.6	3	16.8	0

**Application Directions.** For optimal disease control, begin application of **Sercadis** at pink bud or prior to the onset of disease development and continue on a 7 to 14 day interval. Use the shorter interval when disease pressure is high.

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

**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 three (3) applications of **Sercadis** per season.

*(continued)*

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

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)
Strawberries*	Leaf spot ( <i>Mycosphaerella fragariae</i> , <i>Ramularia tulasnei</i> )	3.4 to 5.7	3	27.3	0
	Powdery mildew ( <i>Sphaerotheca macularis</i> )				
	Botrytis gray mold ( <i>Botrytis cinerea</i> )	6.9 to 9.1			

**Application Directions.** Begin applications of **Sercadis** no later than 10% bloom, or prior to disease development and continue on a 7 to 14 day interval. Use the shorter interval and/or the higher rate when disease pressure is high.

The restricted entry interval (REI) for treated strawberries is **12 hours**. Refer to the **Agricultural Use Requirements** section for PPE required for early entry to treated areas as permitted under the Worker Protection Standard.

**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 three (3) applications of **Sercadis** per season.

\*Not registered for use in California.

*(continued)*

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

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>Succulent shelled peas and beans</b>	Alternaria leaf and pod spot ( <i>Alternaria</i> spp.)	4.5	2	9	7
Pigeon pea	Ascochyta blight ( <i>Phoma exigua</i> , <i>Ascochyta</i> spp.)				
<i>Phaseolus</i> spp. Lima bean, green	Botrytis gray mold ( <i>Botrytis cinerea</i> )				
<i>Pisum</i> spp. English pea	Cercospora leaf spot ( <i>Cercospora</i> spp.)				
Garden pea	Mycosphaerella blight ( <i>Mycosphaerella</i> spp.)				
Green pea	Powdery mildew ( <i>Erysiphe polygoni</i> )				
Broad bean	Rust ( <i>Uromyces appendiculatus</i> )				
<i>Vigna</i> spp. Blackeyed pea	White mold ( <i>Sclerotinia sclerotiorum</i> )				
Cowpea					
Southern pea					

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval if conditions are conducive for disease development. Use the shorter interval when disease pressure is high.

Bean forage, bean hay, pea vines, and pea hay may be fed no sooner than 7 days after last application.

**Use of adjuvants.** The use of additives or adjuvants may improve the performance of **Sercadis** on succulent shelled peas and beans (legumes). However, BASF evaluations also indicate that under some conditions (particularly high temperatures and/or high additive rates), application of **Sercadis** in combination with certain rates of silicone-based or oil-containing (petroleum or crop) additives or adjuvants can cause injury to some legume crops.

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.

**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.

*(continued)*

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

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>Sugar beet (leaves, roots and tops)</b>	Powdery mildew ( <i>Erysiphe betae</i> ) Rhizoctonia stem canker and crown rot ( <i>Rhizoctonia solani</i> )	2.3 to 4.5	3	13.5	7

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 14 day interval if conditions for disease development persist. Use the higher rate when disease pressure is high.

Sugar beet leaves, roots and tops may be fed no sooner than 7 days after last application.

**Sercadis Tank Mixes:** **Sercadis** can be tank mixed with herbicides such as **Poast® herbicide**, **Select® herbicide**, **Assure® II herbicide** or **Prism® herbicide** for postemergence control of grasses in sugar beet. **DO NOT** use silicone-based adjuvants in such combinations. **Sercadis** tank mix combinations can include crop oil concentrate (COC) or methylated seed oil (MSO); however, crop injury may result. The likelihood and level of injury tends to increase with increasing rates of COC or MSO. See the **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than one (1) application of **Sercadis** before the 4-leaf stage of plant growth. After the 4-leaf stage of plant growth, **DO NOT** make more than two (2) sequential applications of **Sercadis** before alternating to a labeled **non-Group 7** fungicide.

*(continued)*

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

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)
Sugarcane*	Brown rust <i>(Puccinia melanocephala)</i>  Orange rust <i>(Puccinia kuehnii)</i>	5.7	3	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.

*(continued)*

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

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>Tree nuts group*</b> African nut-tree Almond Beechnut Brazil nut Brazilian pine Bunya Bur oak Butternut Cajou nut Candlenut Cashew Chestnut Chinquapin Coconut Coquito nut Dika nut Ginkgo Guiana chestnut Hazelnut (Filbert) Heartnut Hickory nut Japanese horse-chestnut Macadamia nut Mongongo nut Monkey-pot Monkey puzzle nut Okari nut Pachira nut Peach palm nut Pecan Pequi Pili nut Pine nut Pistachio Sapucaia nut Tropical almond Walnut, black Walnut, English Yellowhorn Cultivars, varieties, and/or hybrids of these	Alternaria late blight ( <i>Alternaria</i> spp.) Botrytis blossom and shoot blight ( <i>Botrytis cinerea</i> ) Brown rot/Blossom blight ( <i>Monilinia</i> spp.) Eastern filbert blight ( <i>Anisogramma anomala</i> ) Green fruit rot/Jacket rot ( <i>Botrytis cinerea</i> , <i>Sclerotinia sclerotiorum</i> , <i>Monilinia laxa</i> ) Leaf rust ( <i>Tranzschelia discolor</i> ) Panicle and shoot blight ( <i>Botryosphaeria dothidea</i> ) Scab ( <i>Cladosporium carpophilum</i> , <i>C. caryigenum</i> ) Shothole ( <i>Wilsonomyces carpophilus</i> ) <b>Suppression only</b> Hull rot ( <i>Rhizopus stolonifer</i> and <i>Monilinia</i> spp.)	3.4 to 5.7	3	17.1	14

*(continued)*



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

**Tree nuts group\*** *(continued)*

**Application Directions. For almond,** begin applications of **Sercadis** prior to onset of disease development and continue on a 7 to 14 day interval up to 14 days before harvest.

**For filbert,** begin applications at budswell to budbreak, or prior to infection and onset of disease development. Continue on a 7 to 14 day interval to cover and protect new growth.

**For pecan,** begin applications of **Sercadis** prior to onset of disease development and continue on a 7 to 21 day interval for the control of scab. Use the shorter interval and/or the higher rate when disease pressure is high.

**For pistachio,** apply **Sercadis** prior to onset of disease development and continue on a 10 to 30 day interval. Use the higher rate and shorter intervals when disease pressure is high.

**For all other crops listed,** apply **Sercadis** prior to disease development and continue on a 7 to 28 day interval. In all cases use the shorter interval when shoot growth is rapid.

No restriction on livestock feeding of almond hulls.

For aerial application to tree nuts, **DO NOT** use less than 10 gallons of spray solution per acre.

**Resistance Management. DO NOT** apply more than three (3) applications of **Sercadis** per season.

**DO NOT** make more than two (2) sequential applications of **Sercadis** before alternating to a labeled **non-Group 7** fungicide.

\*Not registered for use in California.

*(continued)*

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

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>Tuberous and corm vegetables subgroup</b> <b>Potato</b> Arracacha Arrowroot Cassava (bitter and sweet) Chayote (root) Chinese artichoke Chufa Dasheen (taro) Edible canna Ginger Jerusalem artichoke Leren Sweet potato Tanier True yam Turmeric Yam bean	Black dot ( <i>Colletotrichum coccodes</i> ) Early blight ( <i>Alternaria solani</i> ) Leaf spot ( <i>Cercospora</i> spp., <i>Alternaria</i> spp.) Powdery mildew ( <i>Erysiphe</i> spp., <i>Leveillula taurica</i> ) Rust ( <i>Uromyces</i> spp., <i>Puccinia</i> spp.)	2.3 to 4.5	3	13.5	7
	White mold ( <i>Sclerotinia sclerotiorum</i> )	4.5			

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development and continue on a 7 to 14 day interval. The lower rate and longer interval can be used early season prior to the observance of symptoms and when disease pressure is low.

Use the higher rates and shorter intervals once disease has been confirmed in your area or weather conditions are conducive to disease development.

\*The maximum product rate per year includes the combination of infurrow and foliar uses (for above-listed crops, infurrow use is permitted in potato only).

No livestock feeding restrictions.

**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 three (3) applications of **Sercadis** per season.

*(continued)*

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

**Tuberous and corm vegetables subgroup** *(continued)*

**Instructions for Infurrow Use to Aid in the Control of Soilborne Rhizoctonia in Potatoes**

Use 0.31 fl oz of **Sercadis** per 1000 row feet (for applications on 32-inch or 34-inch rows, the maximum application rate is 0.27 fl oz/1000 row feet). Refer to the chart below to determine the rate per acre. Apply at planting as an infurrow spray by directing spray pattern to uniformly cover seed pieces and surrounding soil. The spray pattern should be a 4 to 8 inch band that is applied to the seed piece prior to being covered with soil.

When Rhizoctonia disease pressure conditions are expected to be severe or if the field has a history of Rhizoctonia infestations, use **Sercadis** at 0.27 to 0.31 fl oz product per 1000 row feet and/or tank mix with a fungicide having a different mode of action.

Use a minimum volume of application of 5 gallons of water per acre.

Product Rate per 1000 row feet  (fl oz product)	Product Rate per Acre (fl ozs product)				
	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.31	See footnote <sup>1</sup>	See footnote <sup>1</sup>	4.5	4.26	4.05

<sup>1</sup>For 32-inch or 34-inch rows, use a maximum of 0.27 fl oz product per 1000 row feet.

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

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>Wheat and triticale</b>	Black point (Kernel blight or Head mold) <i>(Cochliobolus sativus, Alternaria spp., Helminthosporium spp.)</i> Eyespot <i>(Tapesia spp.)</i> Leaf rust <i>(Puccinia spp.)</i> Powdery mildew <i>(Blumeria graminis f. sp. tritici)</i> Septoria leaf and glume blotch <i>(Septoria spp., Stagonospora spp.)</i> Spot blotch <i>(Cochliobolus sativus)</i> Stem rust <i>(Puccinia graminis f. sp. tritici)</i> Stripe rust <i>(Puccinia striiformis f. sp. tritici)</i> Tan spot (Yellow leaf spot) <i>(Pyrenophora spp.)</i>	2.3 to 4.5	2	9	21

**Application Directions.** For optimal disease control, begin applications of **Sercadis** prior to disease development. Use higher rate when disease pressure is high. To maximize yields in cereals, it is important to protect the flag leaf. Apply **Sercadis** immediately after flag leaf emergence for optimum results.

**Sercadis** does not control Fusarium head blight (head scab) or prevent the reductions in grain quality that can result from this disease. When head blight is a concern, growers should manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

**DO NOT** harvest wheat hay or feed green-chopped wheat within 7 days of last application.

**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.

## 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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