

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

April 22, 2021

Robert Hawk Agent, Orion SSD, LLC 12230 E. Del Norte Yuma, AZ 85367-7355

Subject: Registration Review Label Mitigation for Kresoxim-methyl Product Name: KRESOXIM-METHYL 50 WDG FUNGICIDE EPA Registration Number: 92808-2 Application Date: 09/12/2018 Decision Number: 573308

Dear Mr. Hawk:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Kresoxim-methyl Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

Page 2 of 2 EPA Reg. No. 92808-2 Decision No. 573308

If you have any questions about this letter, please contact Srijana Shrestha by phone at 703-305-6471, or via email at <u>shrestha.srijana@epa.gov</u>.

Sincerely,

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Linda Arrington, Branch Chief Risk Management and Implementation Branch 4 Pesticide Re-Evaluation Division Office of Pesticide Programs

Enclosure

## **KRESOXIM-METHYL 50 WDG FUNGICIDE**

KRESOXIM-METHYL GROUP 11 FUNGICIDE

For use on cucurbit vegetables, grapes, apples, pears and other specified pome fruits, and pecans

#### Active Ingredient:

kresoxim-methyl:	
(methyl (E)-2-methoxyimino-2-[2-(o-tolyloxymethyl)phenyl] acetate	50.0%
Other Ingredients:	<u>50.0%</u>
Total	100.0%

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

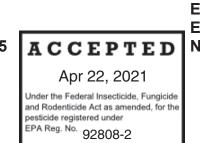
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. If you do not understand the label, find someone to explain it to you in detail.

For MEDICAL emergencies call the National Poison Control Center at 1-800-222-1222. Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment.

For CHEMICAL emergencies call Chemtrec at 1-800-424-9300.

FIRST AID			
lf on skin or	Take off contaminated clothing		
clothing	• Rinse skin immediately with plenty of water for 15 to 20 minutes.		
	Call a poison control center or doctor for treatment advice		
If in eyes	<ul> <li>Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> </ul>		
	<ul> <li>Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes.</li> </ul>		
	<ul> <li>Call a poison control center or doctor for treatment advice</li> </ul>		
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow.</li> </ul>		
	<ul> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> </ul>		
	<ul> <li>Do not give anything by mouth to an unconscious person.</li> </ul>		
If inhaled	Move person to fresh air.		
	<ul> <li>If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth to mouth, if possible.</li> </ul>		
	Call a Poison Control Center or doctor for treatment advice.		

Manufactured for: Orion SSD, LLC 12230 E. Del Norte Yuma, Arizona 85367-7355 Tel. 928-342-3489



EPA Registration No. 92808-2 EPA Establishment No. 83390-CHN-001 Net Contents: 25 lb

# **PRECAUTIONARY STATEMENTS**

# Hazards to Humans and Domestic Animals CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Causes eye irritation. **DO NOT** get on skin, in eyes or on clothing. Avoid breathing vapor or spray mist.

#### **Personal Protective Equipment (PPE)**

Some materials that are chemically resistant to this product are listed below.

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material (polyethylene or polyvinyl chloride)
- 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 Statement**

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. Pilots must use an enclosed cab that meets the definition listed in the WPS for agricultural pesticides [40 CFR 170.305].

#### 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. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **Environmental Hazards**

This pesticide is toxic to freshwater and estuarine fish and invertebrates. **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment wash water or rinsate.

#### Surface Water Advisory

This chemical can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface water (via both dissolution in runoff water and adsorption to eroding soil) for several days post application. These conditions include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and highly erodible soils cultivated using poor agricultural practices such as conventional tillage and down-the-slope plowing, and areas where an intense or sustained rainfall is forecast to occur within 48 hours.

#### Groundwater Advisory

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

#### Physical/Chemical Hazards

Do not mix or allow to come in contact with oxidizing agents. Hazardous chemical reaction may occur.

#### 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) 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 (polyethylene or polyvinyl chloride)
- Shoes plus socks

#### **Product Information**

This package contains **Kresoxim-methyl 50 WDG Fungicide**, a 50% water-dispersible granule (WDG). The active ingredient in **Kresoxim-methyl 50 WDG Fungicide**, kresoxim-methyl, belongs to the strobilurin class of fungicides. Strobilurins are synthetic analogs of a natural anti-fungal substance and belong to the group of respiration inhibitors classified by the EPA as Quinone Outside Inhibitors (QOI) or target site of action **Group 11** fungicides. **Kresoxim-methyl 50 WDG Fungicide** is effective against pathogens resistant to other fungicides of different modes of action.

**Kresoxim-methyl 50 WDG Fungicide** inhibits spore germination, sporulation, and mycelial growth on the leaf surface. Optimum disease control is achieved when **Kresoxim-methyl 50 WDG Fungicide** is applied in a regularly scheduled protective spray program and is used in a rotation program with other fungicides of different modes of action.

- Apple: Kresoxim-methyl 50 WDG Fungicide controls scab, powdery mildew, frogeye leaf spot/black rot, flyspeck, sooty blotch, white rot, Brooks fruit spot and Alternaria blotch. When Kresoxim-methyl 50 WDG Fungicide is applied to control scab and powdery mildew, suppression of cedar apple rust and quince rust also occurs.
- **Pear and other specified Pome Fruit: Kresoxim-methyl 50 WDG Fungicide** controls scab and powdery mildew. When **Kresoxim-methyl 50 WDG Fungicide** is applied to control scab and powdery mildew, suppression of quince rust also occurs.
- **Cucurbit Vegetables: Kresoxim-methyl 50 WDG Fungicide** controls powdery mildew and gummy stem blight. Because of its high specific activity, low vapor pressure, and good rainfastness, **Kresoxim-methyl 50 WDG Fungicide** has good residual activity against target fungi.
- Grape: Kresoxim-methyl 50 WDG Fungicide controls powdery mildew, black rot, Phomopsis cane and leaf spot, and downy mildew. Kresoxim-methyl 50 WDG Fungicide, applied to control these grape diseases, also suppresses Botrytis bunch rot.
- Pecan: Kresoxim-methyl 50 WDG Fungicide controls leaf and nut scab.

**RESTRICTION: DO NOT** apply in the following counties in New York: Nassau and Suffolk.

## Sensitive Crop Precaution

**Kresoxim-methyl 50 WDG Fungicide** may cause injury to certain sensitive cherry varieties such as Van, Sweetheart, Chelan, Somerset, Valera, Vandalay, Cavalier, Coral, Coral Champagne, Angela, Vista, Emperor Francis, Lapins, Royalton, Schmidt, Summit, Viva and Asian pears of variety Olympic (Korean Giant). Use special care when applying **Kresoxim-methyl 50 WDG Fungicide** to prevent contact with these sensitive varieties and other nontarget plants. Avoid offtarget movement. Consult a ORION SSD representative or local agricultural authorities for more information concerning additional cherry varieties that may be sensitive to **Kresoxim-methyl 50 WDG Fungicide**.

Thoroughly rinse spray equipment, including the inside of the tank, hoses and nozzles after and before using the same equipment in crops that are sensitive to **Kresoxim-methyl 50 WDG Fungicide.** 

#### **Resistance Management**

For resistance management, **Kresoxim-methyl 50 WDG Fungicide** contains a Group 11 fungicide. Any fungal population may contain individuals naturally resistant to **Kresoxim-methyl 50 WDG Fungicide** and other Group 11 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

**Kresoxim-methyl 50 WDG Fungicide** is effective against pathogens resistant to fungicides with modes of action different than those of QOI fungicides, such as sterol inhibitors, dicarboximides, benzimidazoles, anilinopyrimidines, or phenylamides. The repeated and exclusive use of **Kresoxim-methyl 50 WDG Fungicide** and other strobilurin (QOI) fungicides, such as azoxystrobin and trifloxystrobin, may allow less sensitive strains of target fungi to build over time

and may reduce disease control. Target fungi exhibiting resistance to other strobilurin (QOI) fungicides may also exhibit resistance to **Kresoxim-methyl 50 WDG Fungicide**. To maintain the performance of **Kresoxim-methyl 50 WDG Fungicide** and other strobilurin (QOI) fungicides in the field, the use of this product should conform to resistance management strategies stated for each crop in **Crop-specific Information**.

To delay fungicide resistance, take one or more of the following steps:

• Rotate the use of **Kresoxim-methyl 50 WDG Fungicide** or other Group 11 fungicides within a growing season sequence with different groups that control the same pathogens. Avoid application of more than 2 consecutive sprays of **Kresoxim-methyl 50 WDG Fungicide** or other Group 11 fungicides in the same group in a season."

• Use tank mixtures with fungicides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.

• Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.

• Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.

• Monitor treated fungal populations for resistance development.

• Contact your local extension specialist or certified crop advisor for any additional pesticide resistance management and/or IPM recommendations for specific crops and pathogens.

• For further information or to report suspected resistance contact Orion SSD, LLC at 928-342-3489. You can also contact your pesticide distributor or university extension specialist to report resistance.

## **Cleaning Spray Equipment**

Spraying equipment must be cleaned thoroughly before and after applying this product, particularly if a product with the potential to injure crops was used prior to **Kresoxim-methyl 50 WDG Fungicide.** 

## **APPLICATION INSTRUCTIONS**

Apply specified rates of **Kresoxim-methyl 50 WDG Fungicide** as instructed in **Crop-specific Information.** Ground application is recommended for thorough coverage. Aerial application can be made for those crops or in conditions where applications are not possible using ground equipment.

## SPRAY DRIFT MANAGEMENT

#### Ground Application

Apply **Kresoxim-methyl 50 WDG Fungicide** in sufficient water to ensure thorough coverage of foliage, bloom, or fruit. Thorough coverage is required for optimum disease control.

- **DO NOT** apply when conditions favor drift from target area or when windspeed is greater than 10 mph.
- Do not apply during temperature inversions.

• Apply with the nozzle height recommended by the manufacturer but no more than 4 feet above the ground or canopy.

Equipment should be checked frequently for calibration. Under low-level disease conditions, the minimum application rates can be used. Maximum application rates and shortened spray schedules are recommended for severe or threatening disease conditions.

## Aerial Application

Aerial application can be made and thorough coverage is required to obtain optimum disease control. Avoid applications under conditions when uniform coverage cannot be obtained or when spray drift may occur. Use no less than 5 gallons of spray solution per acre. Not registered for aerial application in California.

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use<sup>1</sup>/<sub>2</sub> swath displacement upwind at the downwind edge of the field
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

## SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

## IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### Controlling Droplet Size - Ground Boom

- **Volume** Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- **Pressure** Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- **Spray Nozzle** Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### Controlling Droplet Size - Aircraft

 Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

**BOOM HEIGHT- Ground Boom -** For ground equipment, the boom should remain level with the crop and have minimal bounce.

**RELEASE HEIGHT** – **Aircraft** - Higher release heights increase the potential for spray drift.

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

## TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

#### WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## ADDITIVES

Usually additives or adjuvants are not necessary for effective use of **Kresoxim-methyl 50 WDG Fungicide.** If the pH of the tank mix is 9 or greater, ORION SSD recommends a buffer or acidifier be added to optimize performance of **Kresoxim-methyl 50 WDG Fungicide**.

Refer to **Tank Mixing Information.** Consult an ORION SSD representative or local authorities for more information about additives.

## TANK MIXING INFORMATION

#### **Tank Mix Partners/Components**

**Kresoxim-methyl 50 WDG Fungicide** can be tank mixed with many fungicides, insecticides, plant growth regulators, adjuvants or additives when registered for the same uses. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can also influence crop tolerance and may not match those under which ORION SSD has conducted testing. Physical incompatibility, reduced disease control, or crop injury may result from mixing **Kresoxim-methyl 50 WDG Fungicide** with other products. Therefore, before using any tank mix (fungicides, insecticides, plant growth regulators, adjuvants, or 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.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

## **Mixing Order**

- 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 Kresoxim-methyl 50 WDG Fungicide, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions).

6. Water-soluble products.

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- 7. Emulsifiable concentrates (such as oil concentrate when applicable).
- 8. **Water-soluble additives** [such as ammonium sulfate (AMS) or urea ammonium nitrate (UAN) when applicable].
- 9. Remaining quantity of water.

Maintain constant agitation during application.

## **RESTRICTIONS AND LIMITATIONS FOR ALL USES**

- **DO NOT** apply in the following counties in New York: Nassau and Suffolk.
- **DO NOT** apply by aerial application in California.
- Maximum seasonal use rates: See Table 1. Crop-specific Restrictions and Limitations.
- Preharvest Intervals (PHI): See Table 1. Crop-specific Restrictions and Limitations.
- Restricted-Entry Interval (REI): 12 hours.
- DO NOT apply less than the Kresoxim-methyl 50 WDG Fungicide specified label rates.
- **DO NOT** apply through any type of irrigation system.

Crop	Minimum Time from Application to Harvest (PHI) (days)(	Maximum Product Rate per Application (ozs/A)	Maximum Number of Applications per Year at Maximum Rate	Maximum Product Rate per Year (ozs/A)
Pome fruit:				
Apple				
Pear				
Quince	30	6.4	3	19.2
Crabapple	50	0.4	5	19.2
Loquat				
Mayhaw				
Oriental Pear				
Cucurbit	0	4.8	4	19.2
Vegetables				
Group <sup>1</sup>				
Cantaloupe				
Cucumber				
Melon				
Squash				
Pumpkin				
Watermelon		0.4		40.0
Grape	14	6.4	3	19.2
Pecan	45	4.8	3	14.4

<sup>1</sup> For a complete list of crops, see Crop-specific Information.

# Apple

Table 2. Kresoxim-methyl 50 WDG Fungicide Application Rates and Timing on Apple			
Target Disease	Directions For Use	Product Application Rate <sup>1</sup> (ozs/A)	
Apple scab (Venturia inaequalis)	Begin at 1/2-inch green or when conditions are conducive for disease development; repeat at 7 - to 10-day intervals depending on the <b>Kresoxim- methyl 50 WDG Fungicide</b> rate, rate of shoot growth, level of disease pressure and the and the curative properties of the fungicide applied after <b>Kresoxim-methyl 50 WDG Fungicide</b> .	3.2 to 6.4	
	Retreat at a 7 -day interval if <b>Kresoxim-methyl</b> <b>50 WDG Fungicide</b> is applied at 3.2 ozs/A, shoots are growing rapidly, disease pressure is high, or a fungicide with protectant activity only is applied following <b>Kresoxim-methyl 50 WDG</b> <b>Fungicide</b> .		
Apple powdery mildew (Podosphaera leucotricha) Frogeye leaf spot (Botryosphaeria obtusa)	Begin at 1/2-inch green and repeat at 7 - to 10- day intervals depending on the rate of shoot growth and level of disease pressure. Retreat at a 7 -day interval if shoots are growing rapidly or disease pressure is high.	4.0 to 6.4	
Alternaria blotch (Alternaria mali) Brooks fruit spot (Mycosphaerella pomi) Flyspeck (Zygophiala jamaicensis) Sooty blotch (disease complex) White rot (Bot rot) (Botryosphaeria dothidea) Black rot (Botryosphaeria obtusa)	Apply <b>Kresoxim-methyl 50 WDG Fungicide</b> at first or second cover and repeat at 7- to 14-day intervals.	4.0 to 6.4	
Cedar-apple rust (Gymnosporangium juniperi- virginianae) Quince rust (suppression) (Gymnosporangium clavipes)	Applications of <b>Kresoxim-methyl 50 WDG</b> <b>Fungicide</b> for the control of scab or powdery mildew will also suppress cedar-apple and quince rust.	3.2 to 6.4	

<sup>1</sup> The rates per acre are based on a tree size requiring a standard dilute spray of 300 gallons per acre.

## Apple Application Information

Make applications of **Kresoxim-methyl 50 WDG Fungicide** in sufficient spray volume to ensure thorough coverage. The rate of **Kresoxim-methyl 50 WDG Fungicide** is dependent on numerous factors, including varietal susceptibility, weather conditions and disease pressure. Refer to **Table 2** for specific instructions for disease control, application timings, and rates. Optimum disease control is achieved when **Kresoxim-methyl 50 WDG Fungicide** is applied in a regularly scheduled protective spray program with other fungicides of different modes of action. When **Kresoxim-methyl 50 WDG Fungicide** is applied is applied curatively against scab, applications of **Kresoxim-methyl 50 WDG Fungicide** must be made as soon as possible following the beginning of a scab infection period, but within 96 hours, and at the highest labeled rate. Subsequent applications should be made within 7 to 10 days as described in **Table 2.** A reliable disease forecasting system must be used to accurately predict and record scab infection periods.

**Kresoxim-methyl 50 WDG Fungicide** applied for the control of scab and powdery mildew will also suppress cedar-apple rust and quince rust. Under conditions of high disease pressure, rotation of **Kresoxim-methyl 50 WDG Fungicide** with other fungicides effective against rust is recommended. During periods of heavy infection pressure, use the higher labeled rates of **Kresoxim-methyl 50 WDG Fungicide** shown in **Table 2**.

#### **Apple Restrictions and Limitations**

- **DO NOT** make more than 3 applications of **Kresoxim-methyl 50 WDG Fungicide** or other strobilurin (QOI) fungicides per year.
- DO NOT make more than 2 sequential applications of Kresoxim-methyl 50 WDG Fungicide.
- Apply Kresoxim-methyl 50 WDG Fungicide in alternation with labeled non-strobilurin (non-QOI) fungicides with a different mode of action.
- The minimum time from application to harvest (preharvest interval) for apples is 30 days.
- The maximum single application rate is 6.4 oz/A.
- The maximum product rate per year is 19.2 oz/A.

## Pome Fruit (Pear, Quince, Crabapple, Loquat, Mayhaw, and Oriental Pear)

Table 3. Kresoxim-methyl 50 WDG Fungicide Application Rates and Timing on Pome Fruit (Pear, Quince, Crabapple, Loquat, Mayhaw, and Oriental Pear)

Target Disease	Directions For Use	Product Application Rate (oz/A)
Scab (Venturia inaequalis, Venturia pyrina)	Begin at 1/2-inch green or when conditions are conducive for disease development; repeat at 7- to 10-day intervals depending on the <b>Kresoxim- methyl 50 WDG Fungicide</b> product rate, rate of shoot growth, level of disease pressure and the curative properties of the fungicide applied after <b>Kresoxim-methyl 50 WDG Fungicide</b> .	3.2 to 6.4
	Retreat at a 7 -day interval if <b>Kresoxim-methyl</b> <b>50 WDG Fungicide</b> is applied at 3.2 ozs/A, shoots are growing rapidly, disease pressure is high, or a fungicide with protectant activity only is applied following <b>Kresoxim-methyl 50 WDG</b> <b>Fungicide</b> .	

## Pome Fruit (Pear, Quince, Crabapple, Loquat, Mayhaw, and Oriental Pear)

Table 3 (continued). Kresoxim-methyl 50 WDG Fungicide Application Rates and Timing on Pome Fruit (Pear, Quince, Crabapple, Loquat, Mayhaw, and Oriental Pear)

Target Disease	Directions For Use	Product Application Rate (oz/A)
Powdery mildew (Podosphaera leucotricha)	Begin at 1/2-inch green and repeat at 7- to 1 0- day intervals depending on the rate of shoot growth and level of disease pressure. Retreat at a 7 -day interval if shoots are growing rapidly or disease pressure is high.	4.0 to 6.4
Suppression Only Quince rust (Gymnosporangium clavipes)	Fungicide for the control	3.2 to 6.4

<sup>1</sup> The rates per acre are based on a tree size requiring a standard dilute spray of 300 gallons per acre.

Make applications of **Kresoxim-methyl 50 WDG Fungicide** in sufficient spray volume to ensure thorough coverage. Apply **Kresoxim-methyl 50 WDG Fungicide** at the rates and intervals described in **Table 5.** For concentrate sprays, use the equivalent rate per acre determined for dilute spray. **Kresoxim-methyl 50 WDG Fungicide** applied for the control of scab and powdery mildew will also suppress quince rust. Under conditions of high disease pressure, rotation of **Kresoxim-methyl 50 WDG Fungicide** with other fungicides effective against rust is recommended. Use the higher rate of **Kresoxim-methyl 50 WDG Fungicide** when heavy infection pressure exists or is anticipated.

Pome Fruit (Pear, Quince, Crabapple, Loquat, Mayhaw, and Oriental Pear) Restrictions and Limitations

- **DO NOT** make more than 3 applications of **Kresoxim-methyl 50 WDG Fungicide** or other strobilurin (QOI) fungicides per year.
- DO NOT make more than 2 sequential applications of Kresoxim-methyl 50 WDG Fungicide.
- Apply Kresoxim-methyl 50 WDG Fungicide in alternation with labeled non-strobilurin (non-QOI) fungicides with a different mode of action.
- The minimum time from application to harvest (preharvest interval) is 30 days.
- The maximum single application rate is 6.4 oz/A.
- The maximum product rate per year is 19.2 oz/A.

Table 4. Kresoxim-methyl 50 WDG Fungicide Application Rates and Timing on Cucurbit           Vegetables			
CROP	Target Disease	Directions for Use	Product Application Rate (ozs/A)
Cucurbit Vegetables Group Chayote Chinese waxgourd Citron melon Cucumber Gherkin Pumpkin Watermelon	Powdery mildew (Sphaerotheca fuliginea, Erysiphe cichoracearum) Gummy stem	Begin applications of <b>Kresoxim-methyl 50 WDG</b> <b>Fungicide</b> before onset of disease development and continue on a 7 - to 10-day interval. Use the higher labeled rate and the shorter interval when disease pressure is high. Begin applications of	3.2 to 4.8 4.8
Edible gourd Chinese Okra Cucuzza Hechima Hyotan	blight (Oidymella bryoniae)	<b>Kresoxim-methyl 50 WDG</b> <b>Fungicide</b> before onset of disease development and continue on a 7- to 10-day interval	7.0
<b>Momordica spp.</b> Balsam apple Balsam pear Bitter melon Chinese cucumber			
Muskmelon Cantaloupe Casaba Crenshaw melon Golden pershaw melon Honey balls Honeydew melon Mango Melon Persian melon Pineapple melon Santa Claus melon Snake melon			
Summer squash Crookneck squash Scallop squash Straightneck squash Vegetable marrow Zucchini			
Winter squash Acorn squash Butternut squash Calabaza Hubbard squash Spaghetti squash			

## Cucurbit Vegetable Application Information

**Kresoxim-methyl 50 WDG Fungicide** provides optimum disease control when applied in a regularly scheduled protective fungicide program and used in a spray program that rotates fungicides with different modes of action.

**Kresoxim-methyl 50 WDG Fungicide** may be applied by ground sprayer or aerial equipment at the rates listed in **Table 3**.

Begin applications of **Kresoxim-methyl 50 WDG Fungicide** before onset of disease development and continue on a 7- to 10-day interval. Use the higher labeled rate and the shorter interval when disease pressure is high.

The use of additives or adjuvants may improve the performance of **Kresoxim-methyl 50 WDG Fungicide.** However, ORION SSD evaluations also indicate that under some conditions (particularly high temperatures and/or high additive rates) application of **Kresoxim-methyl 50 WDG Fungicide** in combination with certain rates of silicone-based or oil-containing (petroleum or crop) additives or adjuvants can cause injury to some cucurbit crops.

ORION SSD 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 ORION SSD has conducted testing. Physical incompatibility, reduced disease control, or crop injury may result from mixing **Kresoxim-methyl 50 WDG Fungicide** with other products.

To minimize the likelihood of crop injury, ORION SSD recommends testing **Kresoxim-methyl 50 WDG Fungicide** 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 an ORION SSD representative for more information concerning additives or adjuvants.

## **Cucurbit Vegetables Restrictions and Limitations**

- On cucurbit vegetables, do not make more than 4 applications of **Kresoxim-methyl 50 WDG Fungicide** or other strobilurin (QOI) fungicides per year.
- Do not make more than 1 application of **Kresoxim-methyl 50 WDG Fungicide** before alternating to a labeled non-strobilurin (non-QOI) fungicide with a different mode of action for at least one application.
- Do not exceed the total number of sequential applications of Kresoxim-methyl 50 WDG
   Fungicide and the total number of applications of Kresoxim-methyl 50 WDG Fungicide per year stated in this label.
- **Kresoxim-methyl 50 WDG Fungicide** is not for use in greenhouse or transplant production systems for food crops including cucurbits.
- Cucurbit vegetables listed on the **Kresoxim-methyl 50 WDG Fungicide** label may be planted immediately following the last application. All other crops can be planted 14 days after the last application.
- The minimum time from application to harvest (preharvest interval) is 0 days.
- The maximum single application rate is 4.8 oz/A.
- The maximum product rate per year is 19.2 oz/A.

Adhere to the label instructions regarding the consecutive applications of **Kresoxim-methyl 50 WDG Fungicide** or other target site of action **Group 11** fungicides that have a similar site of action on the same pathogens.

Fungal isolates of the gummy stem blight and powdery mildew pathogens listed in this label that are resistant to **Group 11** fungicides, such as pyraclostrobin, azoxystrobin, trifloxystrobin, and kresoxim-methyl, may dominate the fungal population if **Group 11** fungicides were 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 **Kresoxim-methyl 50 WDG Fungicide** or other **Group 11** fungicides.

**NOTE:** Isolates of gummy stem blight and powdery mildew with reduced sensitivity to **Group 11** fungicides have been detected in various locations. Disease control from **Kresoxim-methyl 50 WDG Fungicide** or other **Group 11** fungicides may be less than satisfactory where these isolates are predominant.

**DO NOT** use **Kresoxim-methyl 50 WDG Fungicide** for control of these diseases where resistance to **Group 11** fungicides exists.

Table 5. Kresoxim-methyl 50 WDG Fungicide Application Rates and Timing on Grape			
Target Disease	Directions For Use	Product Application Rate(oz/A)	
Grape powdery mildew <i>(Uncinula necator)</i>	Begin at bud break and continue applications on a 14- day interval; under low disease pressure, the interval may be extended up to 21 days.	3.2 to 4.8	
Grape black rot ( <i>Guignardia bidwelii</i> ) Phomopsis cane and leaf spot ( <i>Phomopsis viticola</i> )	Begin at bud break and continue on a 14-day interval.	3.2 to 4.8	
Downy mildew (Plasmopara viticola)	Begin at bud break and continue on a 7- to 10-day interval.	4.0 to 6.4	
Suppression Only Botrytis bunch rot (Botrytis cinerea)	Applications of <b>Kresoxim- methyl 50 WDG Fungicide,</b> made between early bloom and veraison for the control of powdery mildew, downy mildew, black rot or Phomopsis, will also suppress Botrytis bunch rot.	3.2 to 6.4	

Grape

#### **Grape Application Information**

Use Kresoxim-methyl 50 WDG Fungicide as a protective spray as described in Table 4.

Make applications of **Kresoxim-methyl 50 WDG Fungicide** in sufficient spray volume to ensure thorough coverage. **DO NOT** use less than 10 gallons of water per acre.

The use of organosilicone-based adjuvants in a tank mix with **Kresoxim-methyl 50 WDG Fungicide** may result in marginal burn of the youngest leaves of certain sensitive varieties.

For grape varieties more susceptible to powdery mildew or under conditions that favor rapid powdery mildew development, use the higher labeled rate of **Kresoxim-methyl 50 WDG Fungicide** per acre.

When powdery mildew pressure is low, the spray interval can be extended up to 21 days. ORION SSD recommends that a reliable risk assessment model (such as the Gubler-Thomas model) be used to assist in determining the spray interval. Consult your local agriculture extension agent or ORION SSD representative for more information.

For downy mildew control, begin sprays at bud break and continue on a 7- to 10-day schedule. Under conditions that favor severe downy mildew development, use 6.4 ounces of **Kresoxim-methyl 50 WDG Fungicide** per acre.

**Kresoxim-methyl 50 WDG Fungicide** applied for control of the previously mentioned grape diseases between early bloom and veraison will also provide suppression of Botrytis bunch rot. Under conditions of high disease pressure, effective Botryticides are recommended for control of Botrytis bunch rot.

#### **Grape Restrictions and Limitations**

- Do not make more than 3 applications per year.
- **DO NOT** make more than 2 sequential applications of **Kresoxim-methyl 50 WDG Fungicide**.
- Apply Kresoxim-methyl 50 WDG Fungicide in alternation with labeled non-strobilurin (non-QOI) fungicides with a different mode of action.
- The minimum time from application to harvest (preharvest interval) is 14 days.
- The maximum single application rate is 6.4 oz/A.
- The maximum product rate per year is 19.2 oz/A.

Table 6. Kresoxim-methyl 50 WDG Fungicide Application Rates and Timing on Pecan			
Target Disease	Directions For Use	Product Application Rate(ozs/A)	
Scab (Cladosporium caryigenum)	<b>Prepollination:</b> Begin at bud break and continue on a 14-day interval through the end of pollination.	2.4 to 3.2	
Scab (Cladosporium caryigenum)	<b>Postpollination:</b> Apply on a 21-day interval until shell hardening.	3.2 to 4.8	

#### Pecan

#### **Pecan Application Information**

The best scab control will be achieved by using **Kresoxim-methyl 50 WDG Fungicide** on a protective spray schedule. Depending on spray timing and infection pressure apply 2.4 to 4.8 ounces of **Kresoxim-methyl 50 WDG Fungicide** as described in **Table 6.** To ensure good coverage, ORION SSD recommends using a minimum of 50 gallons of water per acre.

## Pecan Restrictions and Limitations

- **DO NOT** make more than 3 applications of **Kresoxim-methyl 50 WDG Fungicide** or other strobilurin (QOI) fungicides per year.
- DO NOT make more than 2 sequential applications of Kresoxim-methyl 50 WDG Fungicide.
- Apply Kresoxim-methyl 50 WDG Fungicide in alternation with labeled non-strobilurin (non-QOI) fungicides with a different mode of action.
- The minimum time from application to harvest (preharvest application) is 45 days.
- The maximum single application rate is 4.8 oz/A.
- The maximum product rate per year is 14.4 oz/A.

## Storage and Disposal

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

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

**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 representative 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.

Triple rinse containers small enough to shake (capacity  $\leq$  50 pounds) as follows: Empty the remaining contents into application equipment or a mix tank. 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. Then offer for recycling if available, or reconditioning, 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 too large to shake (capacity > 50 pounds) 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. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank. 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. Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

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