

Pyraclostrobin	Group	11	Fungicide
Fluxapyroxad	Group	7	Fungicide

# Merivon®

## Xemium® Brand Fungicide

For disease control and plant health in the following crops: avocado, bulb vegetables, cucurbit vegetables, grapes, leafy vegetables, pome fruits, pomegranate, root vegetables, stone fruits, strawberries, and tree nuts

Powered by Xemium® and F500® fungicides

#### **Active Ingredients:**

Total:	
Other Ingredients:	57.48%
1 <i>H</i> -pyrazol-3-yl]oxy]methyl]phenyl]methoxy-, methyl ester)	21.26%
pyraclostrobin**: (carbamic acid, [2-[[[1-(4-chlorophenyl)-	
1-methyl-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)	21.26%
fluxapyroxad <sup>*</sup> : 1 <i>H</i> -Pyrazole-4-carboxamide, 3-(difluoromethyl)-	

<sup>\*</sup> Equivalent to 2.09 pounds of fluxapyroxad per gallon.

EPA Reg. No. 7969-310

**EPA Est. No.** 

## WARNING/AVISO

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 full label 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).

**Shake Well Before Using** 

#### **Net Contents:**

BASF Agricultural Solutions US LLC 2 TW Alexander Drive Research Triangle Park, NC 27713

<sup>\*\*</sup> Equivalent to 2.09 pounds of pyraclostrobin per gallon.

FIRST AID					
If swallowed	<ul> <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>DO NOT induce vomiting unless told to do so by a poison control center or doctor.</li> <li>DO NOT give anything by mouth to an unconscious person.</li> </ul>				
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth to mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>				
If on skin	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>				
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 Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information: 1-800-832-HELP (4357).

#### **Precautionary Statements**

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

**WARNING.** May be fatal if swallowed. Harmful if inhaled. Avoid breathing spray mist.

#### Personal Protective Equipment (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves (barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber  $\geq$  14 mils, natural rubber  $\geq$  14 mils, polyethylene, polyvinyl chloride (PVC)  $\geq$  14 mils, or Viton  $\geq$  14 mils)
- Shoes plus socks

#### **User Safety Requirements**

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 thoroughly with soap and water after handling and 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 and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

**DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

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

#### **Surface Water Advisory**

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 ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this active ingredient or its degradates from runoff water and sediment. Runoff of this product will be reduced by avoiding application 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**

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

#### **Directions For Use**

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

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 restrictedentry 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**.

Exception is a 5 day REI for:

 cane tying and leaf pulling tasks in grapes. Notify workers of this prohibition.

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 (barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or Viton ≥ 14 mils)
- 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.

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.

#### STORAGE AND DISPOSAL (continued)

#### **Container Handling** (continued)

**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.

#### In Case of Emergency

In case of large-scale spillage regarding this product, call:

• CHEMTREC 1-800-424-9300

• BASF 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 1-800-832-HELP (4357)

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

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

#### **Product Information**

This package contains Merivon® Xemium® brand fungicide, a suspension concentrate (SC) containing fluxapyroxad and pyraclostrobin. The active ingredients in Merivon belong to two classes of fungicides, the strobilurins or Quinone Outside Inhibitors (QoI) and succinate-dehydrogenase (SDH) inhibitor classes. To maximize disease control, apply Merivon in a regularly scheduled protective spray program and use in a rotation program with other fungicides.

Preventive applications optimize disease control, resulting in improved plant health. Overall increased plant health may result in an improvement in crop growth and crop quality as well as increased crop yields.

Because of its high specific activity, **Merivon** has residual activity against target fungi.

Information regarding the contents and levels of metals in this product is available on the Internet at http://www.aapfco.org/metals.htm.

**Merivon** is not for use in greenhouse or transplant production.

#### **Modes of Action**

Fluxapyroxad and pyraclostrobin, the active ingredients of **Merivon**, belong to the groups of respiration inhibitors classified as target-site-of-action **Group 7** and **Group 11** fungicides, respectively.

#### **Resistance Management**

For resistance management, please note that **Merivon** contains a premix of **Group 7** (fluxapyroxad) and **Group 11** (pyraclostrobin) fungicides. Any fungal population may contain individuals naturally resistant to **Merivon** and other **Group 7** or **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.

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

- Rotate the use of Merivon or other Group 7 or Group 11 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are equally effective on the target pest when such a use is permitted. Use at least the minimum labeled rates of each fungicide in the tank mix.
- Adopt an integrated disease and pest 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 treatment area for lack of efficacy that might indicate possible resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistancemanagement and/or IPM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact your local BASF representative, extension specialist or certified crop advisor.

#### **Application Instructions**

Apply specified rates of Merivon® Xemium® brand fungicide as instructed in Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions. Merivon can be applied by ground and aerial application. For best results, thorough coverage of plant materials is required. Merivon can also be applied through sprinkler irrigation equipment. Check equipment frequently for calibration.

Under low-level disease conditions, the minimum application rates can be used while maximum application rates and shortened spray schedules are advised for severe or threatening disease conditions.

#### **Ground Application**

Apply **Merivon** in sufficient water to ensure thorough coverage of foliage, bloom, and fruit. Thorough coverage is required for optimum disease control. Complete coverage of the stem, all the way down to the soil, is required for suppression of soilborne diseases of the stem.

#### **Instructions for Directed or Banded Crop Sprays**

The application rates shown in Table 1. Merivon®
Xemium® brand fungicide Restrictions and
Limitations Overview and Table 3. Merivon®
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, Merivon may be used 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
Merivon in proportion to the area actually sprayed. Make
this adjustment to avoid applying the product at use rates
higher than permitted on this label.

The following formula may be used to determine the broadcast equivalent rate for doing directed or banded sprays:

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

**Example:** A directed spray application will be made to 45-inch plant beds that are separated by 15 inches of unsprayed row middles.

45 inches sprayed bed width + 15 inches unsprayed row middles = 60 inches total row width

The calculation to determine the appropriate equivalent rate of product to use for this situation based on a label broadcast rate of 4 fluid ounces product/acre follows:

45 inches
sprayed bed width
60 inches total
row width

4 fl ozs
Merivon
treated acre

4 fl ozs
field ozs

#### Mandatory Spray Drift Management

#### **Aerial Applications:**

- **DO NOT** release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to select nozzle and pressure that deliver a medium or coarser droplet size (ASABE S641).
- **DO NOT** apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- If the windspeed is 10 miles per hour or less, applicators must use 1/2 swath displacement upwind at the downwind edge of the field. When the windspeed is between 11 to 15 miles per hour, applicators must use 3/4 swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply during temperature inversions.

#### **Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 4 ft above the ground or crop canopy.
- Applicators are required to select nozzle and pressure that deliver uniform application and desired spray quality. A medium or coarser droplet size is preferred (ASABE S572).
- **DO NOT** apply when wind speeds exceed 15 mph 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.

#### **Boomless Ground Applications**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

#### **Handheld Technology Applications**

Take precautions to minimize spray drift.

#### 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 Spravers

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.

#### **Aerial Application**

For aerial application in New York State, DO NOT apply within 100 feet of aquatic habitats (including, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fishponds).

For all crops listed in this label, 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. **DO NOT** use less than 2 gallons of spray solution per acre. For aerial applications to tree crops, DO NOT use less than 10 gallons of spray solution per acre. For aerial applications to avocado, **DO NOT** use less than 20 gallons of spray solution per acre. For all other crops, thorough coverage is required for optimum disease control. The reduced spray volumes used in aerial applications may result in physical incompatibility, reduced disease control, or crop injury from Merivon® Xemium® brand fungicide applications, particularly when tank mixed with other products. Therefore, before making aerial applications test the spray on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

**DO NOT** apply when possible drift can occur to: unprotected persons; to food, forage, or other plantings that might be damaged; or crops that would then be rendered unfit for sale, use or consumption.

Where states have more stringent regulations, they must be observed.

#### **Sensitive Areas**

The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g. bodies of water or non-target crops) is minimal and when wind is blowing away from the sensitive areas.

## **Directions for Use Through Irrigation Systems**

#### **Sprayer Preparation**

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

#### **Application Instructions**

Apply **Merivon** at rates and timings as required in this

#### **Use Precautions for Sprinkler Irrigation**

 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 equipment. **DO NOT** apply this product through any other type of irrigation system.

- Add Merivon® Xemium® brand fungicide 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 optimal control. Main-
- Contact a state extension service specialist, equipment manufacturers or other experts for calibration questions.

tain agitation during the entire application period.

- 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, must shut the system down and make necessary adjustments should the need arise.
- DO NOT connect an irrigation system 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 must be discharged into a reservoir tank prior to pesticide introduction. There must be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

#### **Additives and Tank Mixing Information**

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.

Merivon can be tank mixed with fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives as specified in Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions. See avocado, cucurbit vegetables group, grapes, and leafy vegetables group in Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions for exceptions.

Under some conditions, the use of additives or adjuvants may improve the performance of **Merivon**. 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 BASF has conducted testing. Physical incompatibility, reduced disease control, or crop injury may result from mixing **Merivon** 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 advises the use of a Chemical Producers and Distributors Association certified adjuvant.

## Consult a BASF representative or local agricultural authorities for more information concerning additives.

If tank mixes are used, follow restrictions for rates, label instructions, and precautions on all labels.

## Compatibility Test for Tank Mix Components

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

- 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 ed source at the source temperature.
- 2. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions) Cap the jar and invert 10 cycles.
- 3. **Water-soluble products** Cap the jar and invert 10 cycles.
- 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 must 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.

#### Mixing Order

Maintain constant agitation throughout mixing and application. Make sure that each component is thoroughly mixed and suspended before adding tank mix partners. See

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions for more details and applicable restrictions.

- 1. **Water** Begin by agitating a thoroughly clean sprayer tank 3/4 full of clean water.
- 2. **Inductor** If an inductor is used, rinse it thoroughly after each component has been added.
- 3. 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.
- Water-dispersible products (including dry flowables, wettable powders, suspension concentrates including Merivon, or suspo-emulsions):
  - Containers 5 gallons or less: shake well before use.
  - Containers larger than 5 gallons: recirculate before use.
  - Consult BASF Representatives for additional information regarding agitation and recirculation.
- 5. Water-soluble products

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

#### **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 **Merivon**.

#### **Restrictions and Limitations**

- DO NOT exceed the maximum product rate (fl ozs/A) per year, the maximum product rate per application, or the maximum number of applications of Merivon per year as stated in Table 1. Merivon® Xemium® brand fungicide Restrictions and Limitations Overview and Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions. Retreatment and preharvest interval (PHI) restrictions are also included in these tables.
- **DO NOT** use less than the minimum gallons per acre listed in the crop-specific directions (**Table 3**).
- DO NOT apply more than the maximum annual use rate
  of ai/acre for each specific crop from any combination of
  products containing pyraclostrobin or fluxapyroxad. See
  Table 2. Merivon® Xemium® brand fungicide Rate
  Conversions for corresponding pounds active ingredient per acre.
- DO NOT use Merivon in greenhouse or transplant production.
- Merivon is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.
- **DO NOT** use **Merivon** on Concord, Noiret and NY73.0136.17 grape varieties due to possible foliar injury. Possible foliar injury could occur to Worden, Fredonia, Niagara, Steuben, Rougeon or related varieties. Not all varieties have been thoroughly tested.
- Crop Rotation Restriction The following crops may be planted immediately following the last application: alfalfa, 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 (including tomato), grapes, leafy vegetables, millet, mint (spearmint and peppermint), oat, oilseed crops (including flax seed, rapeseed and sunflower), peanut, pome fruits, pomegranate, root vegetables, rye, sorghum, 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 rice, **DO NOT** plant sooner than 14 days after the last application.

For all other crops not listed above, **DO NOT** plant sooner than 365 days after the last application.

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

	Minimum	Maximum				Maximum
Crop**	Time from Application to Harvest (PHI) (days)	Product Rate per Application (fl ozs/A)	Retreatment Interval (days)	Maximum Number of Applications per Year	Maximum Number of Sequential Applications	Product Rate per Year (fl ozs/A)
Avocado	0	11	14	3	2	33
Bulb vegetables crop group 3-07	7	11	7	3	2	33
Cucurbit vegetables crop group 9	0	5.5	7	3	1	16.5
Grapes	14	5.5	28	6	2	33
Leafy vegetables (except Brassica) crop group 4	1	11	7	3	2	33
Pome fruits	0	5.5	7	4	2	22
Pomegranate	14	7	7	2	2	14
Root vegetables (except sugar beet) crop subgroup 1B	7	5.5	7	3	2	16.5
Stone fruits	0	6.7	7	3	2	20.1
Strawberries	0	11	7	3	2	33
Tree nuts crop group 14	14	6.5	7	3	2	19.5

<sup>\*</sup>See Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions for additional directions.

<sup>\*\*</sup> For a complete list of crops within a crop group, see **Table 3. Merivon® Xemium® brand fungicide Cropspecific Directions**.

Table 2. Merivon® Xemium® brand fungicide Rate Conversions\*

Rate (fl ozs/A)	Fluxapyroxad (lb ai/A)	Pyraclostrobin (lb ai/A)
4	0.065	0.065
4.8	0.078	0.078
5	0.082	0.082
5.1	0.083	0.083
5.4	0.088	0.088
5.5	0.090	0.090
6	0.098	0.098
6.5	0.106	0.106
6.7	0.109	0.109
7	0.114	0.114
8	0.131	0.131
11	0.180	0.180
14	0.228	0.228
16.5	0.269	0.269
19.5	0.318	0.318
20.1	0.328	0.328
22	0.359	0.359
33	0.539	0.539

<sup>\*</sup> Corresponding pounds active ingredient per acre for Product Use Rates (oz/A) in **Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions**. Also see **Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions** for the maximum product use rate per year in ozs/A and lb ai.

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Avocado*	Anthracnose (Colletotrichum spp.)	5 to 11	3	33	0

<sup>\*</sup> State-specific Restrictions - Not registered for use in California.

**Application Directions.** Begin applications of **Merivon** prior to onset of disease development and continue on a 14-day interval.

For ground applications to avocado, use a minimum of 100 gallons of spray solution per acre.

Mechanically pressurized backpack sprayer applications may be used.

For aerial applications to avocado, use a minimum of 20 gallons of spray solution per acre.

Apply **Merivon** in sufficient spray volume to provide complete plant coverage without excessive runoff. Thorough plant coverage is required to maximize the effectiveness of **Merivon**.

**DO NOT** tank mix with other pesticide products, additives, nutrients, or any adjuvants other than NIS. When mixing with NIS, **DO NOT** exceed 1 pint/100 gallons (0.125% v/v).

All varieties and cultivars have not been tested with NIS tank mix combinations. Local conditions can also influence crop tolerance. Therefore, before tank mixing **Merivon** with NIS adjuvants, test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not result.

#### Restrictions

The minimum retreatment interval is 14 days.

**DO NOT** use **handheld/portable fogger/mister**. For mechanically pressurized backpack sprayer applications, refer to PPE requirements under **Precautionary Statements**.

**DO NOT** apply more than 11 fl ozs (0.180 lb fluxapyroxad 0.180 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 33 fl ozs (0.539 lb fluxapyroxad, 0.539 lb pyraclostrobin) per acre per year.

**DO NOT** apply more than 3 applications per year.

**DO NOT** make more than two (2) sequential applications of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide.

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions (continued)

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Bulb vegetables crop group 3-07	Powdery mildew (Leveillula taurica)	5.5 to 11	3	33	7
Chive, Chinese, fresh leaves	Purple blotch and leaf blight (Alternaria porri)				
Chive, fresh leaves Daylily, bulb Elegans hosta Fritillaria, bulb	Stemphylium leaf blight and stalk rot (Stemphylium vesicarium)				
Fritillaria, leaves Garlic, bulb	Botrytis leaf blight (Botrytis spp.)	8 to 11			
Garlic, great-headed, bulb Garlic, serpent, bulb	Botrytis neck rot (Botrytis spp.)				
Kurrat	Suppression only				
Lady's leek Leek Leek, wild	Downy mildew (Peronospora destructor)				
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					

**Application Directions.** Begin applications of **Merivon** 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** exceed the maximum limits in the table above.

#### Restrictions

The minimum retreatment interval is 7 days.

**DO NOT** apply more than 11 fl ozs of **Merivon** (0.180 lb fluxapyroxad, 0.180 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 33 fl ozs of **Merivon** (0.539 lb/acre fluxapyroxad, 0.539 lb/acre pyraclostrobin) per acre per year.

**DO NOT** make more than 3 applications per year.

**DO NOT** make more than two (2) sequential applications of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide.

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions (continued)

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Cucurbit vegetables crop group 9	Alternaria leaf blight (Alternaria cucumerina)	4 to 5.5	3	16.5	0
Chayote Chinese waxgourd Citron melon Cucumber	Powdery mildew (Podosphaera spp., Sphaerotheca spp., Erysiphe spp.)				
Gherkin Pumpkin Watermelon	Anthracnose (Colletotrichum orbiculare)	5.5			
Edible gourd Chinese okra	Cercospora leaf spot (Cercospora citrulina)				
Cucuzza Hyotan	Gummy stem blight (Didymella bryoniae)				
Momordica spp. Balsam apple Balsam pear Bitter melon Chinese cucumber	Microdochium blight (Plectosporium tabacinum) Target leaf spot (Corynespora cassiicola)				
Muskmelon Cantaloupe Casaba Crenshaw melon Golden pershaw melon Honeydew melon Honey balls Mango melon Persian melon Pineapple melon Santaclaus melon Snake melon	Suppression only  Downy mildew (Pseudoperonospora cubensis)				
Summer squash Crookneck squash Scallop squash Straightneck squash Vegetable marrow Zucchini					
Winter squash Acorn squash Butternut squash Calabaza Hubbard squash Spaghetti squash					

Cucurbit vegetables crop group 9 (continued)

**Application Directions.** For optimal disease control, begin applications of **Merivon** 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.

Mix **Merivon** with water only for applications to crops listed in the cucurbit vegetables group.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** exceed the maximum limits in the table above. See the restriction below regarding gummy stem blight resistance.

#### Restrictions

**DO NOT** apply **Merivon** to any crops in the cucurbit vegetables 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.

The minimum retreatment interval is 7 days.

**DO NOT** apply more than 5.5 fl ozs of **Merivon** (0.090 lb fluxapyroxad, 0.090 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 16.5 fl ozs of **Merivon** (0.269 lb fluxapyroxad, 0.269 lb pyraclostrobin) per acre per year.

**DO NOT** make more than 3 applications per year.

**DO NOT** make more than one (1) application of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide. In areas where gummy stem blight resistance to **Group 7** or **Group 11** fungicides have been confirmed, tank mix with chlorothalonil at full label rates and adhering to all label precautions.

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions (continued)

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Grapes Wine and raisin	Powdery mildew (Erysiphe necator)	4 to 5.5	6	33	14
See Crop Safety Precaution below					

**Application Directions. DO NOT** allow workers to perform cane tying and leaf pulling tasks for 5 days after application. Notify workers of this prohibition.

**For powdery mildew control,** begin applications of **Merivon** at bud break or prior to onset of disease and continue on 28 day intervals. The minimum retreatment interval is 28 days for powdery mildew control.

#### Use of Adjuvants and Other Products as Mixes with Merivon.

The use of adjuvants or additives may improve the performance of **Merivon** on **wine and raisin** grapes. However, under certain conditions, mixtures of **Merivon** with adjuvants, additives and/or other products may cause crop injury. Caution must be exercised if **Merivon** is tank mixed with products containing high amounts of solvents as crop response to actively growing foliage and/or fruit can occur under certain conditions.

The use of citrus oils or adjuvants containing methylated seed oil (MSO) may increase the likelihood of necrotic spots and/or marginal necrosis on active growing leaves of certain sensitive varieties.

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 **Merivon** may result from mixing **Merivon** with other products. Refer also to the **Conditions of Sale and Warranty** section of this label.

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

Consult your local BASF representative for more information specific to your area and specific conditions that may cause crop response.

Crop Safety Precaution. DO NOT use Merivon on Concord, Noiret and NY73.0136.17 varieties due to possible foliar injury. Possible foliar injury could occur to Worden, Fredonia, Niagara, Steuben, Rougeon or related varieties. Not all varieties have been thoroughly tested.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** exceed the maximum limits in the table above.

Grapes (continued)

#### Restrictions

**DO NOT** use **handheld/portable fogger/mister**. For mechanically pressurized backpack sprayer applications, refer to PPE requirements under **Precautionary Statements**.

The minimum retreatment intervals are listed above with their corresponding diseases.

**DO NOT** apply more than 5.5 fl ozs of **Merivon** (0.090 lb fluxapyroxad, 0.090 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 33 fl ozs of **Merivon** (0.539 lb/acre fluxapyroxad, 0.539 lb/acre pyraclostrobin) per acre per year.

**DO NOT** make more than 6 applications per year.

**DO NOT** make more than two (2) sequential applications of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide.

**DO NOT** mix with EC formulation pesticides.

**DO NOT** mix with petroleum oil-based products such as mineral and paraffinic oil (including phytobland oil) or with blended adjuvants containing petroleum oil-based products, e.g., stylet oil, crop oil concentrate and crop oil (emulsifiable).

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions (continued)

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Leafy vegetables (except Brassica) crop group 4  Amaranth	Alternaria leaf spot (Alternaria spp.)  Anthracnose (Colletotrichum spp.)	4 to 11	3	33	1
Arugula Cardoon Celery	Ascochyta leaf spot (Ascochyta spp.)				
Celery, Chinese Celtuce Chervil	Cercospora leaf spot (Cercospora spp.)				
Chrysanthemum (edible-leaved and	Phoma (Phoma spp.)				
garland) Corn salad Cress (garden and Upland)	Powdery mildew (Erysiphe spp., Phyllactinia spp., Sphaerotheca spp.)				
Dandelion Dock Endive Fennel, Florence	Rust (Puccinia spp., Uromyces spp.)				
Lettuce (head and leaf) Orach	Septoria leaf spot (Septoria spp.)				
Parsley Purslane	White rust (Albugo spp.)				
(garden and winter)	Suppression only	6 to 11			
Radicchio (red chicory) Rhubarb Spinach	Downy mildew (Peronospora spp., Pseudoperonospora spp.)				
Spinach (New Zealand and	Botrytis rot (Botrytis spp.)	8 to 11			
vine) Swiss chard	Lettuce downy mildew (Bremia spp.)				
	Lettuce drop caused by Sclerotinia minor				

**Application Directions.** Begin applications of **Merivon** 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 **Merivon** 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 **Merivon** with water only for applications to spinach (all varieties).

Leafy vegetables (except Brassica) crop group 4 (continued)

**Leafy vegetables (except spinach).** It is impossible for BASF to test all varieties of leafy vegetables for sensitivity to **Merivon** 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 **Merivon** use, particularly in tank mixes and/or adjuvant combinations on leafy vegetables. To reduce the risk of leafy vegetable injury, BASF advises testing **Merivon** or **Merivon** 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 **Merivon** 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** exceed the maximum limits in the table above.

#### Restrictions

The minimum retreatment interval is 7 days.

**DO NOT** apply more than 11 fl ozs of **Merivon** (0.180 lb fluxapyroxad, 0.180 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 33 fl ozs of **Merivon** (0.539 lb/acre fluxapyroxad, 0.539 lb/acre pyraclostrobin) per acre per year.

**DO NOT** make more than 3 applications per year.

**DO NOT** make more than two (2) sequential applications of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide.

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions (continued)

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Pome fruits	Alternaria blotch (Alternaria mali)	4 to 5.5	4	22	0
Apple Crabapple Pear Pear, Oriental	Apple scab (Venturia inaequalis)				
	Bitter rot (Colletotrichum spp.)				
	Black rot/Frogeye leaf spot (Botryosphaeria obtusa)				
	Blue mold* (Penicillium spp.)				
	Brooks spot (Mycosphaerella pomi)				
	Flyspeck (Zygophiala jamaicensis)				
	Gray mold rot* (Botrytis cinerea)				
	Pear scab (Venturia pirina)				
	Powdery mildew (Podosphaera leucotricha)				
	Sooty blotch (disease complex)				
	White rot (Botryosphaeria dothidea)				
	Suppression only				
	Cedar apple rust (Gymnosporangium juniperi-virginianae)				
	Quince rust (Gymnosporangium clavipes)				

**Application Directions.** For scab, powdery mildew, frogeye leafspot and rust, begin applications of **Merivon** 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 **Merivon** prior to disease development and continue on a 7 to 14 day interval.

#### Use of Adjuvants and Other Products as Mixes with Merivon.

The use of adjuvants or additives may improve the performance of **Merivon** on pome fruits. However, under certain conditions, mixtures of **Merivon** with adjuvants, additives and/or other products may cause crop injury. Caution must be exercised if **Merivon** 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 and specific conditions that may cause crop injury.

Pome fruits (continued)

#### DO NOT use Merivon with:

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

For **pears**, **DO NOT** use **Merivon** 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 **Merivon** may result from mixing **Merivon** with other products. Refer also to the **Conditions of Sale and Warranty** section of this label.

To minimize the likelihood of crop injury, BASF advises testing **Merivon** 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.

No restriction on livestock grazing or feeding.

For aerial application to pome fruit trees, use a minimum of 10 gallons of spray solution per acre.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** exceed the maximum limits in the table above.

#### Restrictions

**DO NOT** use **handheld/portable fogger/mister**. For mechanically pressurized backpack sprayer applications, refer to PPE requirements under **Precautionary Statements**.

The minimum retreatment interval is 7 days.

**DO NOT** apply more than 5.5 fl ozs of **Merivon** (0.090 lb fluxapyroxad, 0.090 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 22 fl ozs of **Merivon** (0.359 lb fluxapyroxad, 0.359 lb pyraclostrobin) per acre per year.

**DO NOT** make more than 4 applications per year.

**DO NOT** make more than two (2) sequential applications of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide.

\* Not registered for use in California.

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions (continued)

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Pomegranate	Alternaria black heart (Alternaria spp.) Anthracnose (Colletotrichum spp.)	7	2	14	14

**Application Directions.** Begin applications of **Merivon** prior to onset of disease development and continue on a 14 day interval.

Apply **Merivon** in sufficient spray volume to provide complete plant coverage without excessive runoff. Thorough plant coverage is required to maximize the effectiveness of **Merivon**.

**East of the Rocky Mountains:** To avoid crop injury, **DO NOT** apply **Merivon** to pomegranates as a tank mix with any adjuvants, liquid fertilizers, nutrients, or anything other than water.

**West of the Rocky Mountains: Merivon** may be tank mixed with NIS adjuvants at a rate not to exceed 8 fl ozs/100 gallons (0.0625% v/v). **DO NOT** tank mix with other pesticide products, additives, nutrients, or any adjuvants other than NIS. All varieties and cultivars have not been tested with NIS tank mix combinations. Local conditions can also influence crop tolerance. Therefore, before tank mixing **Merivon** with NIS adjuvants, test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not result.

#### Restrictions

**DO NOT** use **handheld/portable fogger/mister**. For mechanically pressurized backpack sprayer applications, refer to PPE requirements under **Precautionary Statements**.

The minimum retreatment interval is 7 days.

**DO NOT** apply more than 7 fl ozs (0.114 lb fluxapyroxad 0.114 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 14 fl ozs (0.228 lb fluxapyroxad, 0.228 lb pyraclostrobin) per acre per year.

**DO NOT** apply more than 2 applications per year.

**DO NOT** make more than two (2) sequential applications of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide.

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions (continued)

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Root vegetables (except sugar beet) crop subgroup 1B*  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 (Alternaria spp.) Powdery mildew (Erysiphe spp., Leveillula spp.)	4 to 5.5	3 16.5	7	
	Cercospora leaf spot/blight (Cercospora spp.)	5.5			

**Application Directions.** For optimal disease control, begin applications of **Merivon** 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** exceed the maximum limits in the table above.

#### Restrictions

The minimum retreatment interval is 7 days.

**DO NOT** apply more than 5.5 fl ozs of **Merivon** (0.090 lb fluxapyroxad, 0.090 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 16.5 fl ozs of **Merivon** (0.269 lb fluxapyroxad, 0.269 lb pyraclostrobin) per acre per year.

**DO NOT** make more than 3 applications per year.

**DO NOT** make more than two (2) sequential applications of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide.

\* Not registered for use in California, except on carrot.

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions (continued)

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Stone fruits  Apricot Cherry (sweet and tart) Nectarine Peach Plum (all varieties) Plumcot Prune	Alternaria leaf spot (Alternaria spp.) Anthracnose (Colletotrichum spp.) Blossom blight (Monilinia spp.) Blue mold (Penicillium spp.) Brown rot (Monilinia spp.) Gray mold (Botrytis spp.) Leaf spot (Blumeriella jaapii) Powdery mildew (Sphaerotheca spp., Podosphaera spp.) Ripe fruit rot (Monilinia fruticola, Monilinia laxa, Botrytis cinerea, Rhizopus spp.) Rust (Tranzschelia discolor) Scab (Cladosporium carpophilum)	(fl ozs/A) 4 to 6.7	ger Year  3	(fl ozs/A) 20.1	
	Shothole (Wilsonomyces carpophilus)				

**Application Directions.** For optimal disease control, begin application of **Merivon** at pink bud or prior to the 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.

#### Use of Adjuvants and Other Products as Mixes with Merivon.

The use of adjuvants or additives may improve the performance of **Merivon** on stone fruits. However, under certain conditions, mixtures of **Merivon** with adjuvants, additives and/or other products may cause crop injury, particularly to fruit within two weeks of harvest. Caution must be exercised if **Merivon** 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 and specific conditions that may cause crop injury.

#### **Up to Two Weeks Before Harvest**

**Merivon** can be used with nonionic, organosilicone or **blended** MSO/OS (methylated seed oil/organosilicone) adjuvants.

#### **DO NOT** use **Merivon** with:

• Crop oil concentrate (COC), methylated seed oil (MSO) adjuvants.

Stone fruits (continued)

#### Within Two Weeks of Harvest - Use on Cherries (See below for other Stone Fruit crops)

**Merivon** can only be used with nonionic adjuvants that **DO NOT** acidify and/or enhance penetration. **DO NOT** exceed 0.0625% (v/v) concentration when using these adjuvants.

#### DO NOT use Merivon with:

- Emulsifiable concentrate (EC) or solvent-based formulation products.
- Crop oil concentrate (COC), methylated seed oil (MSO), organosilicone (OS), MSO/OS blend adjuvants.
- Nonionic surfactant (NIS) adjuvant products that acidify or enhance plant penetration.

#### Within Two Weeks of Harvest - Use on Stone Fruit crops other than Cherries

#### DO NOT use Merivon with:

• Crop oil concentrate (COC), methylated seed oil (MSO), organosilicone (OS), MSO/OS blend adjuvants.

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

To minimize the likelihood of crop injury, BASF advises testing **Merivon** 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 stone fruit trees, use a minimum of 10 gallons of spray solution per acre.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** exceed the maximum limits in the table above.

#### Restrictions

**DO NOT** use **handheld/portable fogger/mister**. For mechanically pressurized backpack sprayer applications, refer to PPE requirements under **Precautionary Statements**.

The minimum retreatment interval is 7 days.

**DO NOT** apply more than 6.7 fl ozs of **Merivon** (0.109 lb fluxapyroxad, 0.109 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 20.1 fl ozs of **Merivon** (0.328 lb fluxapyroxad, 0.328 lb pyraclostrobin) per acre per year.

**DO NOT** make more than 3 applications per year.

**DO NOT** make more than two (2) sequential applications of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide.

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions (continued)

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Strawberries	Leaf spot (Mycosphaerella fragariae, Ramularia tulasnei)	4 to 7	3	33	0
	Powdery mildew (Sphaerotheca macularis)				
	Anthracnose (Colletotrichum spp.)	5.5 to 8			
	Botrytis gray mold (Botrytis cinerea)	8 to 11			

**Application Directions.** Begin applications of **Merivon** 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.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** exceed the maximum limits in the table above.

#### Restrictions

The minimum retreatment interval is 7 days.

**DO NOT** apply more than 11 fl ozs of **Merivon** (0.180 lb fluxapyroxad, 0.180 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 33 fl ozs of **Merivon** (0.539 lb/acre fluxapyroxad, 0.539 lb/acre pyraclostrobin) per acre per year.

**DO NOT** make more than 3 applications per year.

**DO NOT** make more than two (2) sequential applications of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide.

Table 3. Merivon® Xemium® brand fungicide Crop-specific Directions (continued)

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Tree nuts crop group 14	Anthracnose (Colletotrichum spp.)	5 to 6.5	3	19.5	14
Almond Beechnut Brazil nut Butternut Cashew Chestnut Chinquapin Filbert Hickory nut Macadamia nut Pecan Pistachio Walnut, black Walnut, English	Botrytis blossom and shoot blight (Botrytis cinerea)				
	Brown rot/Blossom blight (Monilinia spp.)				
	Eastern filbert blight* (Anisogramma anomala)				
	Green fruit rot/Jacket rot (Botrytis cinerea, Sclerotinia sclerotiorum, Monilinia laxa)				
	Leaf rust (Tranzschelia discolor)				
	Panicle and shoot blight (Botryosphaeria dothidea)				
	Scab (Cladosporium carpophilum, C. caryigenum)				
	Shothole (Wilsonomyces carpophilus)				
	Suppression only				
	Hull rot (Monilinia spp., Rhizopus stolonife)				
	Alternaria late blight (Alternaria spp.)	6.5			

**Application Directions. For almond**, begin applications of **Merivon** prior to the 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 **Merivon** 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 **Merivon** 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 **Merivon** 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.

#### Tree nuts crop group 14 (continued)

Mechanically pressurized backpack sprayer applications may be used.

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.** To limit the potential for development of resistance, **DO NOT** exceed the maximum limits in the table above.

#### Restrictions

The minimum retreatment interval is 7 days.

**DO NOT** use **handheld/portable fogger/mister**. For mechanically pressurized backpack sprayer applications, refer to PPE requirements under **Precautionary Statements**.

**DO NOT** apply more than 6.5 fl ozs of **Merivon** (0.106 lb fluxapyroxad, 0.106 lb pyraclostrobin) per acre per application.

**DO NOT** apply more than 19.5 fl ozs of **Merivon** (0.318 lb fluxapyroxad, 0.318 lb pyraclostrobin) per acre per year.

DO NOT make more than 3 applications per year.

**DO NOT** make more than two (2) sequential applications of **Merivon** before alternating to a labeled **non-Group 7** or **non-Group 11** fungicide.

\* Not registered for use in California.

#### **Conditions of Sale and Warranty**

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF Agricultural Solutions US LLC ("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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TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

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Merivon® Xemium® brand fungicide is specially formulated and sold by BASF for the control of pests according to the directions on this label. The purchase price of Merivon includes a royalty whereby the purchaser acquires a prepaid license under U.S. Patent No. 5,438,070 and (pending No. 2008/0153707 A1) under which purchaser agrees to employ the purchased quantity of Merivon only for the above-specified uses under BASF's United States patent rights and to provide notice of the terms and conditions of this license to any subsequent purchaser. Uses of Merivon other than those specified on this label are not licensed through the purchase of this product and the use of this product for other purposes may violate this license and patent rights of BASF.

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