

Boscalid	Group	7	Fungicide
Pyraclostrobin	Group	11	Fungicide



# Pristine®

## Fungicide

For use in disease control and plant health in the following crops: alfalfa; Belgium endive; berries; bulb vegetables; carrot; celery; citrus fruit; cucurbit vegetables; globe artichoke; grape; hops; pome fruit; radicchio; root vegetables (except sugar beet); stone fruit; strawberry; and tree nut

#### **Active Ingredients:**

pyraclostrobin*: (carbamic acid, [2-[[[1-(4-chlorophenyl)-	
1 <i>H</i> -pyrazol-3-yl]oxy]methyl]phenyl]methoxy-, methyl ester)	12.8%
boscalid**: 3-pyridinecarboxamide,2-chloro-N-(4'-chloro(1,1'-biphenyl)-2-yl)	25.2%
Other Ingredients:	62.0%
Total:	100.0%

<sup>\*0.128</sup> oz (0.008 lb) of pyraclostrobin in 1 oz of product

EPA Reg No. 7969-199

EPA Est. No.

## CAUTION/PRECAUCION

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

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

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

#### **Net Contents:**

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

<sup>\*\* 0.252</sup> oz (0.0158 lb) of boscalid in 1 oz of product

FIRST AID					
If on skin or clothing	<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>				
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 in eyes	<ul> <li>Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes.</li> <li>Call a poison control center or doctor for treatment advice.</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 by mouth to mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>				
	LIOTI INF NUMBER				

#### **HOTLINE NUMBER**

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

#### **Precautionary Statements**

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

**CAUTION.** Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

#### Personal Protective Equipment (PPE)

#### Applicators and other handlers must wear:

- Protective eyewear (goggles, face shield or safety glasses)
- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of: barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride ≥ 14 mils, or viton ≥ 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 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.

#### **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 clothing/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 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, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

#### **Groundwater Advisory**

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

#### **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 groundwater. 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 including ponds, streams, and springs will reduce the potential loading of boscalid and pyraclostrobin

from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

#### **Directions For Use**

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

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours** for all crop uses except when performing cane tying, cane turning or cane girdling on grapes. The REI is **5 days** for treated grapes when conducting cane tying, cane turning or cane girdling.

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, including plants, soil, or water, is:

- Protective eyewear (goggles, faceshield or safety glasses)
- Coveralls
- Chemical-resistant gloves made of: barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride ≥ 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 agency 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 ≤ 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.

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. 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. 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.

#### In Case of Emergency

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

• CHEMTREC 1-800-424-9300

• BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

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

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

- In case of spill on floor or paved surfaces, mop or sweep spill; then 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 **Pristine® fungicide**, a water dispersible granule (WG). The active ingredients in **Pristine** belong to two classes of fungicides, the strobilurins and anilides. 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. **Pristine** is effective against pathogens resistant to other fungicides. **Pristine** has a protective effect because it inhibits spore germination. It also has a curative effect because it inhibits mycelial growth and sporulation of the fungus on the leaf surface. However, optimum disease control is achieved when **Pristine** is applied in a regularly scheduled protective spray program and is used in a rotation program with other fungicides. Because of its high specific activity and rainfastness, Pristine has good 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.

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

#### **Sensitive Crop Precaution**

**Grapes** - **DO NOT** use on Concord or Noiret (NY73.0136.17) due to foliar injury. Possible foliar injury could occur to Worden, Fredonia, Niagara, Steuben, Rougeon or related grape varieties. Use special care when applying **Pristine** to prevent contact with these sensitive varieties. Not all varieties have been thoroughly tested. Consult a BASF representative for more information concerning these sensitive grape varieties. Thoroughly rinse

spray equipment, including the inside of the tank, hoses and nozzles after and before using the same equipment on grape varieties sensitive to **Pristine**.

Blueberry (highbush and lowbush) - DO NOT apply Pristine to blueberries as a tank mix with other pesticide products except fungicide products that contain captan (N-Trichloromethythio-4-cyclohexene-1,2-dicarboxamide) as the ONLY active ingredient. DO NOT apply Pristine as a tank mix with adjuvants, liquid fertilizers, nutrients or other additives. Only use water as the spray carrier.

#### **Modes of Action**

Pyraclostrobin and boscalid, the active ingredients of **Pristine**, belong to the groups of respiration inhibitors classified by the U.S. EPA and Canada PMRA as target site of action **Group 11** and **Group 7** fungicides, respectively.

#### Resistance Management

For resistance management, please note that **Pristine** contains both a Group 7 (boscalid) and Group 11 (pyraclostrobin) fungicide. Any fungal population may contain individuals naturally resistant to Pristine and other **Group 7** or **Group 11** fungicides. A gradual or total loss of pest control may occur over time if fungicides from these groups are used repeatedly in the same fields. Appropriate resistance-management strategies must be followed. **Pristine** provides effective resistance management of most of its target pathogens because it is a premix of two fungicides with different modes of action. Pristine is effective against pathogens resistant to fungicides with modes of action different from those of target site Group 7 and **Group 11**, including dicarboximides, sterol inhibitors, benzimidazoles, or phenylamides. Pristine is also effective against certain pathogens with resistance to Group 11 fungicides, including pyraclostrobin, azoxystrobin, trifloxystrobin, or kresoxim-methyl. However, fungal isolates resistant to Group 7 or Group 11 fungicides may eventually dominate the fungal population if Group 7 or Group 11 fungicides are used predominantly and repeatedly in the same field in successive years as the primary method of control for the targeted pathogen species, especially if resistance to either Group 7 or Group 11 fungicides is already present in the pathogen population. This may result in reduction of disease control by **Pristine** or other **Group 7** or **Group 11** fungicides. To maintain the performance of Pristine in the field, DO NOT exceed the specified number of applications of Pristine and the total number of applications of **Pristine** per year stated in **Restrictions and Limitations** and crop-specific use requirements. Adhere to the label instructions regarding the sequential use of **Pristine** or other target site of action **Group 7** and **Group 11** fungicides that have a similar site of action on the same pathogens.

To delay fungicide resistance:

 Rotate the use of **Pristine** or other **Group 7** and **Group 11** fungicides within a growing season sequence with different modes of action groups that control the same pathogens.

- Use tank mixtures with fungicides from a different mode of action 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, the impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices. **Pristine® fungicide** may be used in Agricultural Extension advisory (disease forecasting) programs which base application timing on environmental factors favorable for disease development. Consult your local extension specialist, certified crop advisor and/or BASF representative for additional IPM strategies established for your area.
- 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. Note efficacy of all fungicides used in the disease management program against the targeted pathogen and record other factors that may influence fungicide performance and/or disease development.
- 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 a BASF representative. You can also contact your pesticide distributor, university or local extension specialist to report resistance.

#### **Cleaning Spray Equipment**

calibration.

Clean spray equipment thoroughly before and after applying this product, particularly if a product with the potential to injure crops was used prior to **Pristine**.

#### **Application Instructions**

Apply directed rates of **Pristine** as instructed by **Table 3.** 

Pristine® fungicide Crop-specific Requirements.
Under low-level disease conditions, use the minimum application rates. Use maximum application rates and the shorter application interval for severe or threatening disease conditions. Ground application is advised for thorough coverage. Aerial application can be made, including conditions where applications are not possible using ground equipment. Pristine can be applied through sprinkler irrigation equipment. Check equipment frequently for

#### **Ground Application**

Apply **Pristine** in sufficient water to ensure thorough coverage of foliage, bloom, and fruit. Thorough coverage is required for optimum disease control.

#### **Directed or Banded Sprays**

The application rates on the **Pristine** label reflect the amount of product uniformly applied over an acre of ground on a broadcast basis.

In some crops, apply **Pristine** 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 labeled **Pristine** rates in proportion to the area actually sprayed. This adjustment is necessary to avoid applying the product at use rates higher than permitted according to label directions.

Use the following formula to determine the broadcast equivalent rate for doing directed or banded sprays:



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

The calculation to determine the appropriate equivalent rate of product to use for this situation based on a label broadcast rate of 12 ozs/acre follows:

#### **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 fish ponds).

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. For aerial application to citrus fruit, grape, hops, pome fruit, stone fruit, and tree nut, use no less than 10 gallons of spray solution per acre. Thorough coverage is required for optimum disease control.

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

#### Sprayer Preparation

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

#### **Application Instructions**

Apply **Pristine® fungicide** at rates and timings as described in this label.

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

- This product can be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. **DO NOT** apply this product through any other type of irrigation system.
- Add this product 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) per acre. In stationary or noncontinuous moving systems, inject the product-water mixture in the last 15 to 30 minutes of each set allowing sufficient time for all of the required pesticide to be applied by all the sprinkler heads and applying the labeled rate per acre for that crop. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. Thorough coverage of foliage is required for good control. Maintain good agitation during the entire application period.
- If you have questions about calibration, contact a state extension service specialist, equipment manufacturers or other experts.
- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, including a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are

- compatible with pesticides and capable of being fitted with a system interlock.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments when appropriate.
- 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.

#### **Specific Instructions for Public Water Systems**

- 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 (RPZ) backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. Systems must use a metering pump, including a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

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

Under some conditions, the use of additives or adjuvants may improve the performance of **Pristine® fungicide**. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can also influence crop response and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, or crop injury may result from mixing **Pristine** 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.

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

If tank mixtures are used, 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.

**Pristine** can be tank mixed with most fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives. See **Table 3. Pristine® fungicide Crop-specific Requirements** for exceptions.

#### **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 suspoemulsions). Cap the jar and invert 10 cycles.
- 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.
- 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**

- 1. **Water** Begin by filling 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** (including **Pristine**, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
- 6. Water-soluble products
- 7. **Emulsifiable concentrates** (including oil concentrates when applicable)
- 8. **Water-soluble additives** (including ammonium sulfate [AMS] or urea ammonium nitrate [UAN] when applicable)
- 9. Remaining quantity of water

Make sure that each component is thoroughly mixed and suspended before adding tank mix partners. Maintain constant agitation during application. See **Table 3. Pristine® fungicide Crop-specific Requirements** for more details.

#### **Restrictions and Limitations**

- DO NOT exceed the maximum product rate (ozs/A) per year, the maximum product rate per application, or the total number of applications of Pristine per year as stated in Table 1. Pristine® fungicide Restrictions and Limitations Overview and Table 3. Pristine® fungicide Crop-specific Requirements. Preharvest interval (PHI) restrictions are also included in these tables.
- DO NOT apply more than the maximum annual use rate of ai/acre or ozs of product/acre for each specific crop from any combination of products containing pyraclostrobin or boscalid (e.g. Pristine, Endura® fungicide, Cabrio® EG fungicide, Headline® fungicide). To determine lbs of pyraclostrobin per acre, multiply ozs of product/acre by 0.008. To determine lbs of boscalid per acre, multiply ozs of product/acre by 0.0158. See Table 2. Pristine® fungicide Rate Conversions for corresponding pounds active ingredient per acre.
- **Pristine** is not for use in greenhouse or transplant production.
- Blueberry (highbush and lowbush) DO NOT apply
   Pristine to blueberries as a tank mix with other pesticide
   products except fungicide products that contain captan
   (N-Trichloromethythio-4-cyclohexene-1,2-dicarboxamide)
   as the ONLY active ingredient. DO NOT apply Pristine
   as a tank mix with adjuvants, liquid fertilizers, nutrients, or
   other additives. Only use water as the spray carrier.
- **Grape DO NOT** use on Concord or Noiret (NY73.0136.17) due to foliar injury. Possible foliar injury could occur to Worden, Fredonia, Niagara, Steuben,

Rougeon or related grape varieties. Not all varieties have been thoroughly tested.

- Aerial application in hops DO NOT make more than one (1) aerial application of Pristine® fungicide per year and include a myclobutanil product as a tank mix.
- 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 fish ponds).
- DO NOT use on sugar beet.

#### **Crop Rotation Restriction**

Crops listed on the **Pristine** label may be planted immediately following the last application. For all other crops, **DO NOT** plant sooner than 14 days after the last application.

Table 1. Pristine® fungicide Restrictions and Limitations Overview\*

Crop/Crop Group**	Minimum Time from Application to Harvest (PHI) (days)	Maximum Rate per Application (ozs product/A)	Maximum Number of Applications per Year***	Maximum Rate per Year (ozs product/A)	
Alfalfa (including alfalfa grown for seed)	14	18	3	54	
Belgium endive	19	1.6 (cold storage)	1	3.4	
Berry subgroups		,			
Bushberry	0	23	4	92	
Caneberry	0	23	4	92	
Bulb vegetables	7	18.5	6	111	
Carrot	0	10.5	6	63	
Celery	0	25	2	50	
Citrus fruit	0	18.5	4	74	
Cucurbit vegetables	0	18.5	4	74	
Globe artichoke	0	23	3	69	
Grape***	14	23	3	69	
Hops****	14	28	3	84	
Pome fruit	0	18.5	4	74	
Radicchio	14	25	2	50	
Root vegetables (except sugar beet)	0	10.5	6	63	
Stone fruit	0	14.5	5	72.5	
Strawberry	0	23	5	115	
Tree nut	14 (for almond - 25 days)	14.5	4	58	

<sup>\*</sup> See **Table 3. Pristine® fungicide Crop-specific Requirements** for complete directions and exceptions, including restrictions and information regarding crop sensitivity and tank mixtures.

<sup>\*\*</sup> For a complete list of crops labeled within a group, see **Table 3. Pristine® fungicide Crop-specific Requirements**.

<sup>\*\*\*</sup> At maximum use rate, except for grape. See **Table 3. Pristine® fungicide Crop-specific Requirements** for additional exceptions.

<sup>\*\*\*\*</sup> For additional ground, aerial, and sprinkler irrigation (chemigation) application restrictions and limitations, see **Table 3. Pristine® fungicide Crop-specific Requirements**.

Table 2. Pristine® fungicide Rate Conversions\*

Product Use Rate		
(oz/A)	lb ai boscalid	lb ai pyraclostrobin
0.8	0.013	0.006
0.9	0.014	0.007
1.6	0.025	0.013
1.8	0.028	0.014
3.4	0.054	0.027
8	0.126	0.064
9.7	0.153	0.078
10	0.158	0.080
10.5	0.166	0.084
12	0.190	0.096
12.5	0.198	0.100
14	0.221	0.112
14.5	0.229	0.116
15	0.237	0.120
16	0.253	0.128
16.7	0.264	0.134
18	0.284	0.144
18.5	0.292	0.148
23	0.363	0.184
24.5	0.387	0.196
25	0.395	0.200
28	0.442	0.224

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

#### **Crop-specific Requirements**

Table 3. Pristine® fungicide Crop-specific Requirements

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Alfalfa (including alfalfa grown for seed)	Anthracnose (Colletotrichum trifolii) Common leaf spot (Pseudopeziza medicaginis) Downy mildew (Peronospora trifoliorum) Leaf spot (Leptosphaerulina briosiani) Powdery mildew (Erysiphe pisi) Rhizoctonia blight/Black patch (Rhizoctonis spp.) Rust (Uromyces spp.) Spring black stem and Leaf spot (Phoma medicaginis) Stagonospora leaf spot (Stagonospora meliloti) Stemphyllium leaf spot (Stemphyllium spp.) Summer black stem and Leaf spot	(ozs/A) 12 to 18	per Year  2 per cutting or 3 total per year*	(ozs/A) 54	
	(Cercospora medicaginis)  Yellow leaf blotch (Leptotrichila medicaginis)  White mold/Sclerotinia crown and Stem rot (Sclerotinia sclerotiorum, S. trifoliorum)  Suppression Only:  Southern blight (Sclerotium rolfsii)	14 to 18			

#### Alfalfa (including alfalfa grown for seed) (continued)

**Application Directions.** Begin **Pristine** applications when conditions favorable for disease are expected, but prior to onset of disease development. For stand establishment of fall-seeded alfalfa, begin applications in fall through early winter prior to first snowfall or extended cool, wet conditions. For seed pod protection, begin applications at 10% to 30% bloom. Use the higher rate and shorter interval when disease pressure is high.

Using higher rates may improve disease control performance as the crop canopy volume and density increases. Disease control can also be improved when application equipment and spray volume is adjusted to achieve thorough canopy penetration and coverage.

Repeat application on a 14-day to 21-day interval if conditions are favorable for disease development. **DO NOT** make more than two (2) **Pristine** applications per cutting or more than three (3) **Pristine** applications per year at the high application rate.

Under some conditions, additives or adjuvants may improve the performance of **Pristine**.

No livestock feeding restrictions.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (54 ozs/A contains 0.853 lb boscalid, 0.432 lb pyraclostrobin) is not exceeded.

**Resistance Management.** To limit development of resistance, **DO NOT** make more than two (2) sequential **Pristine** applications per cutting or three (3) **Pristine** applications per year. Alternate to a labeled **non-Group 7** or **non-Group 11** fungicide with different mode of action following two (2) sequential **Pristine** applications.

**Restrictions and Limitations.** Minimum retreatment interval is 14 days.

**Table 3. Pristine® fungicide Crop-specific Requirements** (continued)

Crop	Target Disease	Product Use Rate per Application	Maximum Number of Applications per Year	Maximum Product Rate per Crop per Year (ozs product per 1000 lbs roots)	Minimum Time from Application to Harvest (PHI) (days)
Belgium endive*	Root and crown rot (Sclerotinia sclerotiorum)	Prior to cold storage: 0.8 to 1.6 ozs per 1000 lbs roots	1	3.4	19

**Application Directions. Dosage and frequency/timing of applications.** Make one application to the roots when brought into cold storage prior to forcing.

**Prior to Cold Storage.** Make one application as a spray to the roots as they move along a conveyor belt used to bring roots from field transportation into cold storage bins. Apply 0.8 to 1.6 ozs **Pristine** in 3.0 to 3.5 gals of water per 1000 lbs roots.

**DO NOT** apply more than 3.4 ozs **Pristine** (0.054 lb boscalid, 0.027 lb pyraclostrobin) per 1000 lbs roots per crop per year.

**Restrictions and Limitations. DO NOT** apply after the beginning of forcing.

<sup>\*</sup> For use in California only.

 Table 3. Pristine® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Bushberry* Blueberry** (highbush and lowbush) Currant Elderberry Gooseberry Huckleberry  Caneberry* Blackberry (all varieties) Loganberry (black and red)	Alternaria leaf spot and fruit rot (Alternaria spp.) Anthracnose (Colletotrichum spp., Elsinoe spp.) Botrytis gray mold (Botrytis cinerea) Leaf spot and blotch (Mycosphaerella spp., Septoria spp.) Monilinia blight and mummy berry (Monilinia spp.) Phomopsis leaf spot, twig blight, and fruit rot (Phomopsis spp.) Powdery mildew (Microsphaera spp., Oidium spp., Sphaerotheca spp.) Spur blight (Didymella spp., Phoma spp.) Suppression Only: Rust (Arthuriomyces spp., Kuehneola spp., Phragmidium spp., Puccianiastrum spp.)	18.5 to 23	4	92	0

#### Berry subgroups (continued)

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

- \* For the berries listed in this table (except blueberry), it is impossible for BASF to test all bushberry and caneberry crops for sensitivity to **Pristine** under all environments and all potential product mixture combinations. Local conditions can also influence crop response and may not match those under which BASF has conducted testing. Proceed with caution with regard to **Pristine** use, particularly in tank mixes and/or adjuvant combinations on bushberry and caneberry crops. To reduce the risk of berry crop injury, BASF advises testing **Pristine** or **Pristine** tank mixtures on a small portion of the crop before broad scale use. To the extent consistent with applicable law, the user assumes all risks associated with adding products to the **Pristine** spray solution. Refer also to the **Conditions of Sale and Warranty** section of this label.
- \*\* Blueberry (highbush and lowbush) is not registered for use in California. For all other states, **DO NOT** apply **Pristine** to blueberries as a tank mix with other pesticide products except fungicide products that contain captan (N-Trichloromethythio-4-cyclohexene-1,2-dicarboxamide) as the ONLY active ingredient. **DO NOT** apply **Pristine** as a tank mix with adjuvants, liquid fertilizers, nutrients, or other additives. Only use water as the spray carrier.

**DO NOT** apply more than 92 ozs/A (1.45 lbs boscalid, 0.736 lb pyraclostrobin) per year.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Pristine** or other **Group 7** or **Group 11** fungicides before alternating to a labeled fungicide with a different mode of action.

**Restrictions and Limitations.** Minimum retreatment interval is 7 days.

 Table 3. Pristine® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Bulb vegetables Chive, fresh leaves Chive, Chinese, fresh leaves Daylily, bulb Elegans hosta	Botrytis leaf blight (Botrytis spp.)  Botrytis neck rot** (Botrytis spp.)  Purple blotch and leaf blight (Alternaria porri)	14.5 to 18.5 10.5 to 18.5	6*	111	7
Fritillaria, bulb Fritillaria, leaves Garlic, bulb Garlic, great-headed, bulb Garlic, serpent, bulb	Stemphylium leaf blight and stalk rot (Stemphylium vesicarium)  Suppression Only:	18.5			
Kurrat Lady's leek Leek Leek, wild Lily, bulb Onion, Beltsville bunching Onion, bulb Onion, Chinese, bulb Onion, fresh Onion, green Onion, macrostem Onion, pearl Onion, potato, bulb Onion, tree, tops Onion, Welsh, tops Shallot, bulb Shallot, fresh leaves	Downy mildew (Peronospora destructor)				
Cultivars, varieties and/or hybrids of these					

#### Bulb vegetables (continued)

**Application Directions. For control of neck rot, purple blotch and leaf blight,** begin applications of **Pristine** prior to onset of disease development and continue on a 14-day interval. If application intervals shorter than 14 days are needed, rotate to another fungicide with a different mode of action. Use the higher rate when disease pressure is high.

Applications made to control purple blotch, leaf blight and stalk rot will also suppress downy mildew. If downy mildew occurs during a **Pristine** application for these diseases, immediately follow the **Pristine** application with a downy mildew fungicide with a different mode of action.

**For downy mildew**, rotate each application of **Pristine** with an application of a labeled fungicide with a different mode of action.

No restriction on livestock grazing or feeding.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (111 ozs/A contains 1.75 lbs boscalid, 0.888 lb pyraclostrobin) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Pristine** or other **Group 7** or **Group 11** fungicides before alternating to a labeled fungicide with a different mode of action.

Restrictions and Limitations. Minimum retreatment interval is 14 days.

\*\* Not registered for use in California.

**Table 3. Pristine® fungicide Crop-specific Requirements** (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Carrot	Alternaria leaf spot (Alternaria spp.)	8 to 10.5	6*	63	0
	Cercospora leaf spot (Cercospora spp.)				
	Powdery mildew (Erysiphe spp.)				
	Suppression Only:				
	Southern root rot (Sclerotium rolfsii)				

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

No restriction on livestock grazing or feeding for carrot culls.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (63 ozs/A contains 0.995 lb boscalid, 0.504 lb pyraclostrobin) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Pristine** or other **Group 7** or **Group 11** fungicides before alternating to a labeled fungicide with a different mode of action.

**Restrictions and Limitations.** Minimum retreatment interval is 7 days.

**Table 3. Pristine® fungicide Crop-specific Requirements** (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Celery**	Alternaria leaf spot (Alternaria spp.)	10 to 15	2*	50	0
Celery (Chinese)**	Anthracnose (Colletotrichum spp.)				
	Ascochyta leaf spot (Ascochyta spp.)				
	Cercospora leaf spot (Cercospora spp.)				
	Downy mildew (Bremia spp., Peronospora spp.)				
	Phoma ( <i>Phoma</i> spp.)				
	Powdery mildew (Erysiphe spp.)				
	Rust (Puccinia spp.)				
	Septoria leaf spot (Septoria spp.)				
	White rust (Albugo spp.)				
	Botrytis rot (Botrytis spp.)	25			
	Sclerotinia rot and blight (Sclerotinia spp.)				

**Application Directions.** Begin applications of **Pristine** prior to the onset of disease development and continue on a 7-day interval. Use the higher rate when disease pressure is high.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than one (1) application of **Pristine** before alternating to a labeled fungicide with a different mode of action for at least one (1) application.

**Restrictions and Limitations.** Minimum retreatment interval is 7 days.

\*\* Not registered for use in California.

<sup>\*</sup> **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (50 ozs/A contains 0.790 lb boscalid, 0.400 lb pyraclostrobin) is not exceeded.

**Table 3. Pristine® fungicide Crop-specific Requirements** (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Australian desert lime Australian finger lime Australian round lime Brown River finger lime Calamondin Chironja Citron Citrus hybrids Grapefruit Japanese summer grapefruit Kumquat Lemon Lime Mediterranean mandarin Mount White lime New Guinea wild lime Orange, sour Orange, sweet Pummelo Russell River lime Satsuma mandarin Sweet lime Tachibana orange Tahiti lime Tangelo Tangerine (mandarin) Tangor Trifolate orange Uniq fruit Cultivars, varieties and/or hybrids of these	Alternaria brown spot (Alternaria alternata, Alternaria spp.) Citrus black spot* (Guignardia citricarpa) Greasy spot (Mycosphaerella citri) Melanose (Diaporthe citri) Scab (Elsinoe fawcettii)	16 to 18.5	4	74	0

**Application Directions.** Apply **Pristine** in a regularly scheduled protective fungicide program. Begin **Pristine** applications prior to infection and continue on a 10-day to 21-day interval. Use the higher rate and shorter interval when disease pressure is high.

Disease control from **Pristine** depends on disease pressure and various cultural practices that influence rind maturation and disease susceptibility. Improved disease performance may result when **Pristine** is used in a crop management program that minimizes rind overmaturity and rind damage.

No livestock feeding restrictions.

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

**DO NOT** apply more than 74 ozs/A (1.17 lbs boscalid, 0.592 lb pyraclostrobin) per year.

**Resistance Management.** To limit development of resistance, **DO NOT** make more than two (2) sequential applications of **Pristine** or other **Group 7** or **Group 11** fungicides before alternating to a labeled fungicide with different modes of action.

**Restrictions and Limitations.** Minimum retreatment interval is 10 days.

\* Not registered for use in California.

 Table 3. Pristine® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Cucurbit vegetables Chayote Chinese waxgourd Citron melon Cucumber Gherkin Pumpkin Watermelon  Edible Gourd	Alternaria blight (Alternaria cucumerina)  Cercospora leaf spot (Cercospora citrulina)  Downy mildew (Pseudoperonospora cubensis)  Gummy stem blight (Didymella bryoniae)	12.5 to 18.5	4	74	0
Chinese okra Cucuzza Hechima Hyotan	Powdery mildew (Erysiphe cichoracearum, Sphaerotheca fuliginea)				
Momordica spp. Balsam apple Balsam pear Bitter melon Chinese cucumber	Anthracnose (Colletotrichum orbiculare)	18.5			
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					
Cultivars, varieties and/or hybrids of these					

#### **Cucurbit vegetables** (continued)

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

Use the highest labeled rate for anthracnose.

**Tank Mixes with Adjuvants and Other Products.** BASF evaluations indicate that tank mixes of additives, adjuvants, and/or other products with **Pristine** may result in injury. This is particularly true for muskmelon crops including cantaloupe and honeydew. Users need to be aware of this, proceed with caution, and test for crop safety when tank mixing, as stated below.

Applications of additives, adjuvants, and/or other products that increase penetration may cause injury when mixed with **Pristine**. Injury potential from these kinds of tank mixes may decrease with lower rates of the tank mix partner. Users are advised to test for crop safety, as stated below.

BASF has not tested all varieties and cultivars with all possible tank mix combinations and rates of additives, adjuvants, and/or other products. Local environmental conditions also influence crop response and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, or crop injury may result from mixing **Pristine** with other products.

To minimize the likelihood of crop injury, BASF advises testing **Pristine** in combination with additives, adjuvants, and/or 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.

**DO NOT** apply more than 74 ozs/A (1.17 lbs boscalid, 0.592 lb pyraclostrobin) per year. **DO NOT** make more than four (4) applications of **Pristine** per year.

**Resistance Management.** To limit the potential of development of resistance, **DO NOT** make more than one (1) application of **Pristine** before alternating to a labeled fungicide with a different mode of action for at least one (1) application.

#### **Restrictions and Limitations**

- **DO NOT** tank mix **Pristine** with chlorpyrifos, dicofol, endosulfan, malathion, methomyl, potassium salts of fatty acids, or dicloran as crop injury may result.
- Minimum retreatment interval is 7 days.

Table 3. Pristine® fungicide Crop-specific Requirements (continued)

Сгор	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Globe artichoke	Bud rot (Botrytis cinerea)	18.5 to 23.0	3	69	0

**Application Directions. Dosage and frequency/timing of applications.** Begin applications of **Pristine** prior to onset of disease development and continue on a 7-day to 14-day interval. For artichoke bud rot, begin applications at the initiation of the bud protection phase when approximately 25% of the plants have bolted. Use the shorter interval and/or the higher rate when disease pressure is high.

**DO NOT** apply more than 69 ozs/A (1.09 lbs boscalid, 0.552 lb pyraclostrobin) per year.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** exceed the specified number of applications of **Pristine** or other **Group 7** or **Group 11** fungicides per year. Adhere to the label instructions regarding the consecutive use of **Pristine** or other target site of action **Group 7** and **Group 11** fungicides that have a similar site of action on the same pathogens.

#### **Restrictions and Limitations**

- **DO NOT** apply **Pristine** to artichokes 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 **Pristine** with water only for applications to artichokes.
- Minimum retreatment interval is 7 days.

 Table 3. Pristine® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Grape (except Concord or Noiret (NY73.0136.17) due to foliar injury. It is possible that foliar injury could occur on related grape varieties. See comments in the Application Directions for more information.)	Angular leaf spot (Mycosphaerella angulata) Anthracnose (Elsinoe ampelina) Black rot (Guignardia bidwellii) Downy mildew (Plasmopara viticola) Leaf blight (Pseudocercospora vitis) Phomopsis cane and leaf spot (Phomopsis viticola) Powdery mildew (Uncinula necator) Ripe rot (Colletotrichum gloeosporioides) Aids in Control Only: Summer bunch rot (Sour rot) (Aspergillus spp. and Cladosporium spp.) Suppression Only: Botrytis gray mold (Botrytis cinerea)	8 to 12.5	5	69	14
	Botrytis gray mold (Botrytis cinerea)	18.5 to 23	3	•	

#### Grape (continued)

**Application Directions. For powdery mildew control,** begin applications of **Pristine** as of bud break prior to onset of disease, using 8 ozs per acre on a 10-day to 14-day interval. Use 10 to 12.5 ozs per acre on a 14-day to 21-day interval.

**For black rot and downy mildew control,** begin applications of **Pristine** as of pre-bloom prior to onset of disease and continue applications on a 10-day to 14-day interval.

**For all other diseases listed except for Botrytis gray mold,** begin applications of **Pristine** prior to onset of disease and continue applications on a 10-day to 14-day interval. **Pristine** applied at rates of 8 to 12.5 ozs per acre for control of the listed diseases will also suppress Botrytis gray mold.

**For control of Botrytis gray mold,** apply 18.5 to 23 ozs per acre of **Pristine** prior to onset of disease development when conditions favor disease development during early bloom, bunch pre-closure and veraison up to 14 days before harvest.

Use the higher rate and the shorter interval when disease pressure is high.

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

**DO NOT** apply more than 69 ozs/A (1.09 lbs boscalid, 0.552 lb pyraclostrobin) per year.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than five (5) applications of **Pristine** or other **Group 7** or **Group 11** fungicides per year. **DO NOT** make more than two (2) sequential applications of **Pristine** before alternating to a labeled fungicide with a different mode of action.

#### **Restrictions and Limitations**

- DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours
  except when performing cane tying, cane turning or cane girdling. The REI is 5 days for treated grapes
  when conducting cane tying, cane turning or cane girdling.
- DO NOT use on Concord or Noiret (NY73.0136.17) due to foliar injury. Possible foliar injury could occur to Worden, Fredonia, Niagara, Steuben, Rougeon or related grape varieties. Not all varieties have been thoroughly tested. Consult a BASF representative for more information concerning these sensitive grapes.
- Minimum retreatment interval is 10 days.

**Table 3. Pristine® fungicide Crop-specific Requirements** (continued)

Crop	Target Disease	Product Use Rate per Application	Maximum Number of Ground Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Hops (Ground Application)	Powdery mildew (Erysiphe cichoracearum, Sphaerotheca spp.)  Downy mildew (Pseudoperonospora humuli)	14 ozs per 100 gallons of dilute spray  DO NOT use more than 28 ozs per acre.	3 (2 if one aerial application is made)	84 (70 ozs/A if one aerial application is made)	14

**Application Directions.** Begin applications of **Pristine** prior to disease development and continue on a 10-day to 21-day interval. Use the shorter interval when disease pressure is high.

Application rates are based on 100 gallons of dilute spray applied to runoff. Adjust water volume to maintain thorough coverage. Use 25 to 50 gallons of dilute spray per acre prior to trellising and 100 to 200 gallons of dilute spray per acre thereafter. **DO NOT** use more than 200 gallons per acre of this mixture. If additional spray volume is needed for thorough coverage, use 28 ozs of **Pristine** per acre in the required spray volume.

**DO NOT** apply more than 84 ozs/A (1.33 lbs boscalid, 0.672 lb pyraclostrobin) per year. If one aerial application is made, **DO NOT** apply more than 70 ozs/A (1.11 lbs boscalid, 0.560 lb pyraclostrobin) per year. **DO NOT** make more than three (3) applications of **Pristine** per year (counting both ground and aerial applications).

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Pristine** before alternating to a labeled fungicide with a different mode of action.

#### **Restrictions and Limitations**

- **DO NOT** use more than 200 gallons per acre of this mixture. If additional spray volume is needed for thorough coverage, use 28 ozs of **Pristine** per acre in the required spray volume.
- Minimum retreatment interval is 10 days.

**Table 3. Pristine® fungicide Crop-specific Requirements** (continued)

Crop	Target Disease	Aerial Product Use Rate per Application	Maximum Number of Aerial Applications per Year	Aerial Application Timing Growth Stage	Minimum Time from Aerial Application to Harvest (PHI) (days)
Hops (Aerial Application)	Powdery mildew (Erysiphe cichoracearum, Sphaerotheca humuli, Sphaerotheca macularis, Sphaerotheca spp.)	14 ozs/A as a tank mix with a myclobutanil fungicide product (see myclobutanil rate following)	1	Wire to 14 days preharvest	14

**Application Directions.** Aerial application may result in reduced control due to lack of canopy penetration and coverage. Use aerial application only when ground application is not possible.

Apply a preventive spray of **Pristine** at 14 ozs (0.221 lb boscalid, 0.112 lb pyraclostrobin) as a tank mix with a myclobutanil fungicide product at rates **equivalent to 0.15 lb per acre of active ingredient** (including but not limited to: **Rally® 40W fungicide** or **Sonoma® 40WSP fungicide**) for resistance management.

Avoid applications under conditions when uniform coverage cannot be obtained or when spray drift may occur. Use a minimum of 10 gallons of water per acre when applying by air. Thorough coverage is essential.

Because complete coverage is important for effective disease control, **aerial application at low volumes may result** in reduced control due to lack of canopy penetration and coverage.

Mixing **Pristine** with surfactants or foliar fertilizers is not advised when applying by air. Similarly, adjuvants that enhance pesticide penetration may cause phytotoxicity when used with **Pristine** applied by air.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than one (1) aerial application of **Pristine** per year and include a myclobutanil product as a tank mix as described.

 Table 3. Pristine® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Pome fruit Apple	Alternaria blotch (Alternaria mali)	14.5 to 18.5	4	74	0
Azarole Crabapple	Apple scab (Venturia inaequalis)				
Loquat Mayhaw Medlar	Bitter rot (Colletotrichum spp.)				
Pear Pear, Asian	Black rot/Frogeye leaf spot (Botryosphaeria obtusa)				
Pear, Oriental Quince Quince, Chinese Quince, Japanese Tejocote	Blue mold* (Penicillium spp.)				
	Brooks spot (Mycosphaerella pomi)				
Cultivars, varieties and/or hybrids of	Flyspeck (Zygophiala jamaicensis)				
these	Gray mold* (Botrytis spp.)				
	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)				

#### Pome fruit (continued)

**Application Directions for scab, powdery mildew, frogeye leaf spot and rust.** Begin applications of **Pristine** prior to disease development and continue on a 7-day to 10-day interval.

Application Directions for blue mold, gray mold, sooty blotch, flyspeck, white rot, black rot, bitter rot and Alternaria blotch. Begin applications of **Pristine** prior to disease development and continue on a 7-day to 14-day interval.

Use the higher rate and shorter interval when disease pressure is high.

No restriction on livestock grazing or feeding for pome fruit feed items.

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

**DO NOT** apply more than 74 ozs/A (1.17 lbs boscalid, 0.592 lb pyraclostrobin) per year.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than four (4) applications of **Pristine** or other **Group 7** or **Group 11** fungicides per year. **DO NOT** make more than two (2) sequential applications of **Pristine** before alternating to a labeled fungicide with a different mode of action.

#### **Restrictions and Limitations**

- For pears, **DO NOT** use **Pristine** with a horticultural mineral oil as crop response to foliage and/or fruit can occur under certain conditions.
- Minimum retreatment interval is 7 days.
- \* Not registered for use in California.

**Table 3. Pristine® fungicide Crop-specific Requirements** (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Radicchio	Sclerotinia rot and blight (Sclerotinia spp.)	25	2*	50	14

**Application Directions.** Begin applications of **Pristine** prior to the onset of disease development and continue on a 7-day interval. Use the higher rate when disease pressure is high.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than one (1) application of **Pristine** before alternating to a labeled fungicide with a different mode of action for at least one (1) application.

**Restrictions and Limitations.** Minimum retreatment interval is 7 days.

<sup>\*</sup> **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (50 ozs/A contains 0.790 lb boscalid, 0.400 lb pyraclostrobin) is not exceeded.

**Table 3. Pristine® fungicide Crop-specific Requirements** (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
(except sugar beet)**  Beet, garden Burdock, edible Celeriac Chervil, turnip-rooted Chicory Ginseng Horseradish	Alternaria leaf spot (Alternaria spp.) Dercospora leaf spot (Cercospora spp.) Powdery mildew (Erysiphe spp.) Suppression Only: Southern root rot (Sclerotium rolfsii)	8 to 10.5	6*	63	0

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

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (63 ozs/A contains 0.995 lb boscalid, 0.504 lb pyraclostrobin) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than one (1) application of **Pristine** before alternating to a labeled fungicide with a different mode of action for at least one application.

**Restrictions and Limitations.** Minimum retreatment interval is 7 days.

<sup>\*\*</sup> Not registered for use in California.

**Table 3. Pristine® fungicide Crop-specific Requirements** (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Apricot Apricot, Japanese	Alternaria leaf spot (Alternaria spp.)  Anthracnose	10.5 to 14.5	5*	72.5	0
Capulin Cherry, black Cherry, Nanking Cherry, sweet	(Colletotrichum spp.) Blossom blight (Monilinia spp.)				
Cherry, tart Jujube, Chinese Nectarine	Brown rot (Monilinia spp.) Leaf spot				
Peach Plum Plum, American	(Blumeriella jaapii) Powdery mildew				
Plum, beach Plum, Canada Plum, cherry Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Klamath Plum, prune	(Podosphaera spp., Sphaerotheca spp.) Ripe fruit rot (Botrytis cinerea, Monilinia fructicola, Monilinia laxa, Rhizopus spp.)				
Plumcot Sloe	Rust (Tranzschelia discolor)				
Cultivars, varieties, and/or hybrids of	Scab (Cladosporium carpophilum)				
these	Shothole (Wilsonomyces carpophilus)				
Nectarine Peach	Suppression Only:  Leaf curl**  (Taphrina deformans)				

**Application Directions.** Begin application of **Pristine** at pink bud or prior to onset of disease development and continue on a 7-day to 14-day interval. Use the shorter interval and/or the higher rate when disease pressure is high.

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

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (72.5 ozs/A contains 1.15 lbs boscalid, 0.580 lb pyraclostrobin) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Pristine** or other **Group 7** or **Group 11** fungicides before alternating to a labeled fungicide with a different mode of action.

**Restrictions and Limitations.** Minimum retreatment interval is 7 days.

\*\* Not registered for use in California.

Table 3. Pristine® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Strawberry	Anthracnose (Colletotrichum spp.)	18.5 to 23	5*	115	0
	Botrytis gray mold (Botrytis cinerea)				
	Leaf spot (Mycosphaerella fragariae)				
	Powdery mildew (Sphaerotheca macularis)				

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

It is impossible for BASF to test strawberry sensitivity to **Pristine** under all environments and all potential product mixture combinations. Local conditions can also influence crop response and may not match those under which BASF has conducted testing. Proceed with caution with regard to **Pristine** use, particularly in tank mixes and/or adjuvant combinations on strawberry crops. To reduce the risk of strawberry crop injury, BASF advises testing **Pristine** or **Pristine** tank mixtures on a small portion of the crop before broad scale use. To the extent consistent with applicable law, the user assumes all risks associated with adding products to the **Pristine** spray solution. Refer also to the **Conditions of Sale and Warranty** section of this label.

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

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (115 ozs/A contains 1.82 lbs boscalid, 0.920 lb pyraclostrobin) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Pristine** or other **Group 7** or **Group 11** fungicides before alternating to a labeled fungicide with a different mode of action.

**Restrictions and Limitations.** Minimum retreatment interval is 7 days.

 Table 3. Pristine® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Tree nut	Alternaria leaf spot	10.5 to 14.5	4*	58	14
African nut-tree Almond Beechnut Brazil nut Brazilian pine Bunya Bur oak Butternut Cajou nut Candlenut Cashew Chestnut Chinquapin Coconut Coquito nut Dika nut Ginkgo Guiana chestnut Hazelnut (Filbert) Heartnut Hickory nut Japanese horse-chestnut Macadamia nut Mongongo nut Monkey-pot Monkey puzzle nut Okari nut Pachira nut Peach palm nut Pecan Pequi Pili nut Pine nut Pistachio Sapucaia nut Tropical almond Walnut, black Walnut, English Yellowhorn Cultivars, varieties, and/or hybrids of these	(Alternaria spp.) Anthracnose (Colletotrichum spp.) Blossom blight (Monilinia spp.) Botrytis blossom and shoot blight/Green fruit rot (Botrytis cinerea) Eastern filbert blight (Anisogramma anomala) Leaf rust (Tranzschelia discolor) Panicle and shoot blight (Botryosphaeria spp.) Scab (Cladosporium spp.) Shothole (Wilsonomyces carpophilus)				(for almond - 25 days)

#### Tree nut (continued)

**Application Directions. In almond,** begin applications of **Pristine** at pink bud and continue on a 7-day to 14-day interval up to 25 days before harvest. **In filbert,** begin applications at budswell to budbreak, prior to infection and onset of disease development. Continue on a 7-day to 14-day interval to cover and protect new growth. **In pecan,** begin applications of **Pristine** prior to onset of disease development and continue on a 7-day to 21-day interval for the control of scab. **In pistachio,** begin applications prior to the onset of disease development and continue on a 10-day to 30-day interval. **For all other crops listed above,** apply **Pristine** prior to disease development and continue on a 7-day to 28-day interval. In all cases, use the shorter interval when shoot growth is very rapid.

Use the shorter interval and/or the higher rate when disease pressure is high.

No restriction on livestock feeding for almond hulls.

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

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (58 ozs/A contains 0.916 lb boscalid, 0.464 lb pyraclostrobin) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Pristine** or other **Group 7** or **Group 11** fungicides before alternating to a labeled fungicide with a different mode of action.

**Restrictions and Limitations.** Minimum retreatment interval is 7 days.

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

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

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

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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.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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