

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

September 30, 2015

Ms. Teresa S. Cox Regulatory Product Manager Syngenta Crop Protection, LLC P.O. Box 18300 Greensboro, NC 27419

Subject: PRIA Label Amendment – Addition of New Uses for Acerola, Globe Artichoke,

Feijoa, Guava, Jaboticaba, Passionfruit, Starfruit, and Wax Jambu, and Crop Group Conversion on Stone Fruit Group associated with Petition 4E8273;

amended use on tomato- master and supplemental labels

Product Name: Vangard® WG Fungicide EPA Registration Number: 100-828 Application Date: April 24, 2014 Decision Number: 490947 & 490948

Dear Ms. Cox:

The application referred to above, submitted under the Federal Insecticide, Fungicide and Rodenticide Act, as amended is acceptable under FIFRA sec 3 (c)(5). You must submit and/or cite all data required for registration/registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

A stamped copy of your labeling is enclosed for your records. The master labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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

Page 2 of 2 EPA Reg. No. 100-828 Decision No. 490947 & 490948

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Hope Johnson by phone at 703-305-5410, or via email at johnson.hope@epa.gov.

Sincerely,

Cynthia Giles-Parker, Chief

Fungicide Branch

Registration Division (7505P)

Office of Pesticide Programs

Enclosure

# Vangard® WG

# **Fungicide**

Active Ingredient:

Cyprodinil: 4-cyclopropyl-6-methyl-N-phenyl-pyrimidinamine*	75.0%
Other Ingredients:	25.0%
Total:	100.0%

\*CAS No. 121552-61-2

Vangard WG is a water-dispersible granule.

### KEEP OUT OF REACH OF CHILDREN.

# **CAUTION**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. 100-828

EPA Est.

Net Weight

ACCEPTED

Sep 30, 2015

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 100-828

	FIRST AID				
If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5</li> </ul>				
	minutes, then continue rinsing.				
	Call a poison control center or doctor for treatment advice.				
If on skin	Take off contaminated clothing.				
or clothing	Rinse skin immediately with plenty of water for 15-20 minutes.				
	Call a poison control center or doctor for treatment advice.				
	NOTE TO PHYSICIAN				
If ingested, indu	ce emesis or lavage stomach. Treat symptomatically.				
Have the produc	Have the product container or label with you when calling a poison control center or				
doctor, or going	doctor, or going for treatment.				
HOT LINE NUMBER					
For 24-Hour Medical Emergency Assistance (Human or Animal) or					
Chemical Emergency Assistance (Spill, Leak, Fire, or Accident)					
	Call				
1					

### PRECAUTIONARY STATEMENTS

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

### CAUTION

1-800-888-8372

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco or the toilet. Remove and wash contaminated clothing before reuse.

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

Some materials that are chemical-resistant to this product are listed below.

Handlers applying this product as a pre-plant dip to strawberry roots and crowns and workers packaging or preparing treated roots and crowns for shipment must wear:

- Chemical-resistant apron made of any waterproof material
- Elbow-length chemical-resistant gloves made of any waterproof material
- Chemical-resistant boots made of any waterproof material

All other applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof materials such as polyethylene or polyvinyl chloride
- Shoes plus socks

# In addition, mixers and loaders for aerial and groundboom applications must wear:

Filtering facepiece respirator (N95, R95, or P95) (e.g., a dustmask)

# **User Safety Requirements**

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

### **Engineering Control Statements**

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

### **User Safety Recommendations**

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. 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. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

### **Surface and Ground Water Advisory**

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

### **Physical or Chemical Hazards**

Do not use, pour, spill or store near heat or open flame.

### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. 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 manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

### **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

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

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

### PRODUCT INFORMATION

Vangard WG is a broad spectrum fungicide which controls certain diseases in fruits, herbs, nuts and vegetables.

### PRODUCT USE PRECAUTIONS

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES.

### **APPLICATION INFORMATION**

Vangard WG fungicide has preventative and systemic properties and is labeled for the control of many important plant diseases. Vangard WG provides excellent disease control of Botrytis, several leaf spots and powdery mildews. Vangard WG is applied as a foliar spray and can be used in block, alternating spray, or tank-mix programs with other crop protection products. Make all applications according to the use directions that follow.

### PRODUCT USE INSTRUCTIONS

**Application**: Thorough coverage is necessary to provide good disease control. Make no more spray solution than is needed for application. Avoid spray overlap, as crop injury may occur.

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

**Efficacy:** Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications if the maximum amount of Vangard WG has been used. If resistant isolates to Group 9 fungicides are present, efficacy can be reduced for certain diseases. The higher rates in the rate range and/or shorter spray intervals may be required under conditions of heavy infection pressure, with highly susceptible varieties, or when environmental conditions are conducive to disease.

**Integrated Pest Management (IPM)**: Integrate Vangard WG into an overall disease and pest management strategy whenever the use of a fungicide is required. Follow cultural practices known to reduce disease. Consult your local agricultural authorities for additional IPM strategies established for your area. Vangard WG may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

### RESISTANCE MANAGEMENT

# GROUP 9 FUNGICIDE

Vangard WG contains the fungicide cyprodinil, an anilinopyrimidine in Group 9. A disease management program that includes alternation or tank mixes between Vangard WG and other labeled fungicides that have a different mode of action is essential to prevent pathogen populations from developing resistance to Vangard WG. Do not alternate or tank mix this product with fungicides to which resistance has already developed. Vangard WG may be applied in an alternating or blocking program.

As part of a resistance management strategy:

- Apply no more than 2 sequential applications unless otherwise stated in the crop section.
- When tank mixing or alternating, use an effective partner one that provides satisfactory disease control when used alone at the mixture rate.

**Crop Tolerance:** Plant tolerance has been found to be acceptable for all crops on the label, however, not all possible tank-mix combinations have been tested under all conditions. When possible, test the combinations on a small portion of the crop to ensure that a phytotoxic response will not occur as a result of application.

**Spray Drift Management:** To avoid spray drift, do not apply when conditions favor drift beyond the target area. The interaction of many equipment and weather related factors determine the potential for spray drift. AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER. More information on managing spray drift can be found on the SYNGENTA CROP PROTECTION website under Stewardship (<a href="http://www.syngentacropprotection-us.com/enviro/driftmanagement/index.asp?nav=drift\_management">http://www.syngentacropprotection-us.com/enviro/driftmanagement/index.asp?nav=drift\_management</a>).

## **Rotational Crop Restrictions**

Do not plant any crop which is not registered for use with cyprodinil for a period of 30 days, unless a shorter interval is specified on the following list.

Rotation Crop	Planting Time From Last Vangard WG Application
Artichoke, Globe	
Beans (dried and succulent except cowpeas)	
Berries (bushberries 13-07B, caneberries 13-07A)	
Brassica (Cole) Leafy Vegetables	
Cucurbits	
Herbs (fresh and dried)	
Leafy Vegetables	
Leaves of Root and Tuber Vegetables	0 days
Onions (dry bulb, including garlic, and green)	
Peppers	
Root Vegetables except Sugar beet	
Strawberries	
Tomatoes and tomatillos	
Watercress	
Crops Not Intended for Food or Feed	
All Other Crops Intended for Food or Feed	30 days

**Restriction:** In annual crops, where multiple crops can be grown per year (double/triple cropping), do not apply more than 1.3 lb ai per acre per year to an individual plot of land.

### APPLICATION AND MIXING PROCEDURES

### Mixing

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area. Buffer the spray solution to a pH of 5.0-7.0 when tank mixed with Rovral® Fungicide.

**Vangard WG Alone:** Add ½ of the required amount of water to the mix tank. With the agitator running, add the Vangard WG to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the Vangard WG has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

**Vangard WG + Tank Mixtures:** Add ½ of the required amount of water to the mix tank. Start the agitator running before adding any tank-mix partners. In general, add tank-mix partners in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables) such as Vangard WG, liquid flowables, liquids, and emulsifiable concentrates. Always allow each tank-mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all the mixture has been applied.

When using Vangard WG in tank mixtures, add all products in water-soluble packaging to the tank before any other tank-mix partner, including Vangard WG. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank-mix partner to the tank.

If using Vangard WG in a tank mixture, observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank mix product label. Do not exceed label dosage rates, and follow the most restrictive label precautions and limitations. Vangard WG must not be mixed with any product which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are registered.

**Additives:** Vangard WG is compatible with most crop protection additives. Do not use X-77® with Vangard WG for bloom sprays applied to stone fruits, almonds and pistachios.

# Application

For best disease control, apply Vangard WG in sufficient water to provide thorough and uniform coverage. Use minimum ground spray volumes of 50 gal/A for tree crops, 30 gal/A for vine crops, and 15 gal/A for field and vegetable crops. For aerial application, see spray volume requirements in the specific crop directions for use.

To prevent spray drift, do not apply when conditions favor drift beyond the target area. Spray overlap may cause crop injury.

For air assisted or air blast sprayers, move spray droplets into the canopy using a forced air stream. Set up the fan to deliver only enough air volume to penetrate the canopy and provide good coverage. Adjust deflectors or other aiming devices to direct spray only to the target area.

Equip sprayers with nozzles that provide accurate and uniform application. Check whirl plates and nozzle discs for wear and replace as necessary. Calibrate sprayer before use.

Use a pump with capacity to maintain the correct rated pressure for the nozzles selected. Maintain sufficient agitation to keep the spray mixture in suspension. Use a jet agitator, liquid sparge tube, or mechanical paddle for agitation. Do not air sparge.

Use screens to prevent nozzles from clogging. Use 50-mesh or coarser screens placed after the tank and before the nozzles. Check nozzle manufacturer's recommendations.

For more information on spray equipment and calibration, consult sprayer manufacturers and state recommendations. For specific local directions and spray schedules, consult the current state agricultural experiment station recommendations.

OBSERVE THE FOLLOWING RESTRICTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES, RESERVOIRS, RIVERS, PERMANENT STREAMS, MARSHES OR NATURAL PONDS, ESTUARIES, AND COMMERCIAL FISH PONDS.

- Do not apply within 75 ft of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries.
- Shut off the sprayer when row ends.
- Do not cultivate within 10 ft of aquatic areas in order to allow a vegetative filter strip.
- Do not apply when weather conditions favor drift to aquatic areas. Do not apply when gusts or sustained winds exceed 10 mph.
- Do not apply during a temperature inversion. Mist or fog may indicate the presence of an inversion in humid areas.
- For perennial crops such as tree crops and grapes:
  - > For all plantings within 150 ft of bodies of water as described above, spray crops from outside the planting away from the bodies of water.
  - Spray last three rows windward of aquatic areas using nozzles on one side only, with spray directed away from aquatic areas. Adjust or turn off top nozzles to prevent spray going over the tops of trees. Shut off nozzles on the side away from the grove/orchard when spraying the outside row. Shut off nozzles when turning at ends of row or passing tree gaps in the rows.

# **Aerial Spray Directions**

Avoid applications under conditions when uniform coverage cannot be obtained or when excessive drift may occur.

### **Aerial Spray Restrictions**

Observe the following restrictions when spraying in the vicinity of aquatic areas such as lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish ponds.

- Use only on crops where aerial applications are indicated.
- Do not apply by air within 150 ft of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish ponds.
- Mount the spray boom on the aircraft so as to minimize the drift caused by wing tip vortices. Use the minimum practical boom length, and do not exceed 75% of wing span or rotor diameter.
- Release spray at the lowest height consistent with pest control and flight safety. Do
  not make applications more than 10 feet above the crop canopy.
- Do not apply when weather conditions favor drift to aquatic areas. Do not apply when gusts or sustained winds exceed 10 mph.
- Do not apply during a temperature inversion. Mist or fog may indicate the presence of an inversion in humid areas.

### **Aerial Spray Precautions**

Observe the following precautions when spraying in the vicinity of aquatic areas such as lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish ponds.

- Use the largest droplet size consistent with good pest control.
- Formation of very small droplets may be minimized by appropriate nozzle selection, by orientating nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Reduce risk of exposure to aquatic areas by avoiding applications when wind direction is toward the aquatic area.
- Low humidity and high temperatures increase the evaporation rate of spray droplets, and therefore the likelihood of increased spray drift to aquatic area. Avoid spraying during conditions of low humidity and/or high temperatures.

### **Application through Irrigation Systems (Chemigation)**

- Use only on crops for which chemigation is specified on this label.
- Apply this product only through center pivot, solid set, hand move, or moving wheel irrigation systems. Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- Apply in 0.125-0.25 inches/A of water. Excessive water may reduce efficacy.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for
  pesticide application to a public water system, unless the pesticide label-prescribed
  safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

**Note:** Do not inject Vangard WG at full strength or deterioration of valves and seals may occur. Use a dilution ratio of at least 10 parts water to 1 part Vangard WG. Vangard WG is corrosive to many seal materials. Leather seals are best. EPDM or silicone rubber seals can be used, but should be replaced once a year. Do not use Viton®, Buna-N, Neoprene, or PVC seals.

# **Operating Instructions**

- 1. 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.
- 2. The pesticide injection pipeline must contain a functional, automatic, quickclosing check-valve to prevent the flow of fluid back toward the injection pump.
- 3. 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.
- 4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5. 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.

- 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.
- 7. Do not apply when wind speed favors drift beyond the area intended.

# **Center Pivot Irrigation Equipment**

**Restrictions:** (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when chemigating Vangard WG through center pivot systems because of non-uniform application.

- Determine the size of the area to be treated.
- Determine the time required to apply ½-½ inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as recommended by the equipment manufacturer. When applying Vangard WG through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of Vangard WG required to treat the area covered by the irrigation system.
- Add the required amount of Vangard WG and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the Vangard WG solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
- Maintain constant solution tank agitation during the injection period.
- Continue to operate the system until the Vangard WG solution has cleared the sprinkler head.

### Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying Vangard WG through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of Vangard WG required to treat the area covered by the irrigation system.
- Add the required amount of Vangard WG into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.

 Stop injection equipment after treatment is completed. Continue to operate the system until the Vangard WG solution has cleared the last sprinkler head.

### 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, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3. The pesticide injection pipeline must contain a functional, automatic, quickclosing 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.
- 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.
- 7. Do not apply when wind speed favors drift beyond the area intended for treatment.

# CROP USE DIRECTIONS – TREES, NUTS AND VINES

		Product Rate	
Crop	Disease	oz/Acre	Remarks
Almonds	Brown rot blossom blight (Monilinia spp.)  Suppression: Green fruit rot (Jacket rot) (Botrytis cinerea)  Shot hole (Wilsonomyces carpophilus)	5 - 10	Apply Vangard WG at 5-10% bloom. Additional applications at 50-100% bloom and petal fall may be necessary.  When used for control of brown rot blossom blight, Vangard WG will provide suppression of shot hole.  For broad spectrum disease control in tank mixture, apply Vangard WG at a minimum rate of 5 oz in tank mixtures with other fungicides registered for use on almonds.  For suppression of green fruit rot, apply Vangard WG at full bloom.  Disease suppression for almond diseases refers to erratic control from fair to good, or consistent control at a level below that obtained with products registered for control.

**Application Instructions:** Application may be made by ground or air. Good coverage is essential for good disease control. Use a minimum of 20 gallons/A spray volume by air. Make no more than two applications by air.

- 1) Make no more than two applications by air.
- 2) Do not apply more than 30 oz/A of Vangard WG (1.4 lb ai/A of cyprodinil) per year.
- 3) Do not apply within 60 days of harvest (60-day PHI).

Crop	Disease	Product Rate oz/Acre	Remarks
Citrus Lemon Lime	Alternaria Stem End Rot (A. citri)  Anthracnose (Colletotrichum gloeosporioides)  Blue Mold (Penicillium italicum)  Green Mold (Penicillium digitatum)	5.5 - 7	Make one application near harvest to prevent post-harvest fruit rot. The application may be made up to and including the day of harvest.

Application Instructions: Good coverage is essential for good disease control.

- 1) Application may be made by ground only.
- 2) Do not apply more than 7 oz/A of Vangard WG per year.
- 3) Do not apply more than 0.33 lb ai/A of cyprodinil-containing products per year.
- 4) May be applied on the day of harvest (0-day PHI).
- 5) Do not exceed one application per year.

-		Product	
		Rate	
Crop	Disease	oz/Acre	Remarks
Small Fruit Vine Climbing Subgroup 13-07F (except fuzzy kiwifruit)  Grapes Amur river grape Hardy kiwifruit Maypop Schisandra berry  And cultivars and/or hybrids of these	Botrytis bunch rot (Botrytis spp.)  Suppression: Powdery mildew (Uncinula necator)	Vangard WG alone  10  Vangard WG tank mixtures  5 - 10	Begin applications of Vangard WG at early bloom. Make an additional application at berry touch, veraison, or preharvest, using at least a 7-day spray interval. Botrytis bunch rot is most effectively controlled by ground application, using sufficient water volume to provide thorough coverage. Thorough coverage of bunches is essential.  When used at 10 oz/A, Vangard WG will provide significant suppression (approximately 60% control) of powdery mildew.  Apply Vangard WG in tank mixture with the label rate of another fungicide registered on grapes for control of Botrytis bunch rot.

- 1) Make no more than two applications by air.
- 2) Do not apply more than 30 oz/A of Vangard WG (1.4 lb ai/A of cyprodinil) per year.
- 3) Do not apply within 7 days of harvest (7-day PHI).

Crop	Disease	Product Rate oz/Acre	Remarks
Kiwi	Botrytis Fruit Rot (Botrytis spp.)	10	Make 1-2 applications on a 7-10 day interval prior to harvest to prevent post-harvest fruit rot.

### **Specific Use Restrictions**

- 1) Make no more than two applications per year.
- 2) Do not apply more than 20 oz of Vangard WG (0.94 lb ai/A of cyprodinil) per year.
- 3) May be applied on the day of harvest (0-day PHI).

Crop	Disease	Product Rate oz/Acre	Remarks
Pistachios	Botrytis (Botrytis spp.)  Alternaria (Alternaria alternata)	5.5 - 7	Make the first application during early bloom and repeat applications at 14-day intervals if conditions remain favorable for disease development.

**Application Instructions:** Application may be made by ground or air. Good coverage is essential for good disease control. Use a minimum of 20 gallons/A spray volume by air. Make no more than two applications by air.

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
- 3) Do not apply within 7 days of harvest (7-day PHI).

		Product Rate	
Crop	Disease	oz/Acre	Remarks
Pome Fruits*	Prebloom	Vangard WG	For pome fruits except pear, begin application at green tip and continue
Apples Crabapples Loquat	Scab (Venturia spp.)	alone 5	on a 7- to 10-day interval. Under severe disease pressure, use the shorter interval.
Mayhaw Pears (see tank mixture instructions) Quince And cultivars and/or		Vangard WG tank mixtures	For scab control utilizing multiple modes of action, apply Vangard WG in tank mixture with the label rate of a protectant or systemic fungicide registered on pome fruit. Make applications on a 7- to 10-day interval.
hybrids of these	Pink, bloom, post- bloom Scab (Venturia spp.)	Vangard WG tank mixtures 3 - 5	Apply Vangard WG in tank mix combination with the label rate of a protectant fungicide. Use of the label rate of an EBDC fungicide will broaden the disease control spectrum to include cedar apple rust. The addition of the label rate of sulfur or a sterol inhibitor (SI) fungicide to this tank mix will broaden the disease control spectrum to include powdery mildew.

<sup>\*</sup>Complete List of Pome Fruit Crops: Apple; Azarole; Crabapple; Loquat; Mayhaw; Medlar; Pear; Pear, Asian; Quince; Quince, Chinese; Quince, Japanese; Tejocote and cultivars, varieties and/or hybrids of these.

- 1) When applying to pears, apply Vangard WG in tank mix only.
- 2) Make no more than two applications by air.
- 3) Do not apply more than 30 oz/A of Vangard WG (1.4 lb ai/A of cyprodinil) per year.
- 4) Do not apply within 0 days of harvest (0-day PHI).

		Product	
Crop	Disease	Rate oz/Acre	Remarks
Stone Fruits Crop Group 12-12*  Apricots Tart cherries Nectarines Peaches Plums Prunes	Brown rot blossom blight (Monilinia spp.)	5	Begin applications at bloom stage (apricots at red bud, cherries at popcorn, peaches and nectarines at pink bud, plums and prunes at green tip). Make a second application at full bloom. Use Vangard WG alone or in tank mixture with the label rate of another fungicide registered for stone fruit.
A 1 1/2	California only	Vangard	Apply a maximum of 2 applications of
And cultivars and/or hybrids of these	Fruit brown rot (Monilinia spp.)	WG alone	Vangard WG during the preharvest period up through 2 days prior to harvest as needed.
		Vangard WG tank mixtures	Apply Vangard WG in tank mixture with the label rate of another fungicide registered on stone fruit for control of fruit brown rot.

\*Complete List of Stone Fruit: Apricot; Apricot, Japanese; Cherry, tart; Jujube, Chinese; Nectarine; Peach; Plum; Plum, American; Plum, beach; Plum, Canada; Plum, cherry; Plum, Chickasaw; Plum, Damson; Plum, Japanese; Plum, Klamath; Plum, prune; Plumcot; Prune; Sloe; as well as other cultivars and hybrids of these

**Application Instructions:** Application may be made by ground or air. Good coverage is essential for good disease control. Use a minimum of 20 gallons/A spray volume by air. Make no more than two applications by air.

- 1) Do not apply Vangard WG to sweet cherries.
- 2) Make no more than two applications by air.
- 3) Do not apply more than 30 oz/A of Vangard WG (1.4 lb ai/A of cyprodinil) per year.
- 4) Do not apply more than a maximum total of 4 applications (air plus ground) per year.
- 5) Do not apply within 2 days of harvest (2-day PHI).

	T		
		Product	
		Rate	
Crop	Disease	oz/Acre	Remarks
Tropical Fruits	Botrytis fruit rot	5.5 - 7	Make the first application during early
	(Botrytis spp.)		bloom and repeat on 7- to 10-day intervals
Acerola			if conditions remain favorable for disease
Avocado	Alternaria fruit rot		development.
Black sapote	(Alternaria spp.)		
Canistel			Resistance Management: After 2
Dragon Fruit	Anthracnose		applications of Vangard WG, alternate with
Feijoa	(Colletotrichum		another fungicide with a different mode of
Guava	spp.)		action for 2 applications.
Jaboticaba			
Lychee			
Longan			
Mamey sapote			
Mango			
Papaya			
Passionfruit			
Pulasan			
Rambutan			
Sapodilla			
Spanish lime			
Star apple			
Starfruit			
Wax jambu			

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
- 3) Do not apply more than a maximum total of 4 applications (air plus ground) per year.
- 4) May be applied on the day of harvest (0-day PHI).

### CROP USE DIRECTIONS – BERRIES, FRUITS, HERBS AND VEGETABLES

Crop	Disease	Product Rate oz/Acre	Remarks
Artichoke, Globe	Ramularia leaf spot Ramularia bud spot ( <i>R. cynarae</i> )	5.5 - 7.0	Begin applications prior to disease onset when conditions are conducive for disease. Apply Vangard WG on a 14-day schedule, making no more than 2 sequential applications before alternating to another fungicide with a different mode of action.

**Application Instructions:** For best results, sufficient water volume must be used to provide thorough coverage. Vangard WG can be applied by ground, chemigation, or aerial application. For ground applications, apply in 50-200 gallons of water per acre to obtain coverage without excessive runoff. For aerial applications, use a minimum of 10 gal/A of water. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Do not apply more than 28 oz/A of Vangard WG per year.
- 2) Do not apply more than 1.3 lb ai/A/year of a cyprodinil-containing product.
- 3) Do not apply more than a maximum total of 4 applications (air plus ground plus chemigation) per year.
- 4) Do not apply Vangard WG within 3 days of harvest (3-day PHI).

	Product	
	Rate	
Disease	oz/Acre	Remarks
Gray mold (Botrytis cinerea)	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications on a 7-day interval if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.
	Gray mold (Botrytis	Disease Oz/Acre Gray mold (Botrytis)  Rate Oz/Acre  5.5 - 7

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 5 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Make no more than two applications by air.
- 2) Do not apply more 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
- 3) Do not apply within 7 days of harvest (7-day PHI).

		Product	
		Rate	
Crop	Disease	oz/Acre	Remarks
Berries Bushberry Subgroup 13-07B  Aronia berry Black current Blueberry, high and low bush Buffalo current	Mummy berry (Monilinia vacciniicorymbosi)  Anthracnose (Colletotrichum spp.)  Alternaria fruit rot (Alternaria	<b>oz/Acre</b> 5.5 - 7	Remarks  Begin applications prior to or at the onset of disease and repeat applications on a 7- to 10-day interval if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2
Chilean guava Edible honeysuckle Elderberry European barberry Gooseberry Highbush cranberry Huckleberry Jostaberry Juneberry (Saskatoon berry) Lingonberry Native currant Red currant Salal Sea buckthorn  Caneberry Subgroup 13-07A  Blackberry Loganberry Red and Black Raspberry Wild raspberry And cultivars and/or hybrids of these	tenuissima)  Botrytis fruit rot (Botryis cinerea)		applications.

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
- 3) May be applied on the day of harvest (0-day PHI).

	1		
		Product	
		Rate	
Crop	Disease	oz/Acre	Remarks
Brassica	Powdery	5.5 - 7	Begin applications prior to or at the onset of
(Cole) Leafy	mildew		disease and repeat applications on a 7- to
Vegetables*	(Erysiphe		10-day interval if conditions remain
	polygoni)		favorable for disease development.
Broccoli			
Brussels			Resistance Management: After 2
sprouts			applications of Vangard WG, alternate with
Cabbage			another fungicide with a different mode of
Cabbage,			action for 2 applications.
Chinese			
Cauliflower			
Collards			
Kale			
Mustard greens			
Turnip greens			
And cultivars			
and/or hybrids			
of these			

<sup>\*</sup>Additional Cole Vegetables: Broccoli, Chinese, Broccoli raab, Cavalo broccolo, Kohlrabi, Mizuna, Mustard spinach, and Rape greens.

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Make no more than two applications by air.
- 2) Do not use roots of treated turnips for food or feed. Only turnip varieties harvested for their leaves may be treated.
- 3) Do not apply more than 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
- 4) Do not apply within 7 days of harvest (7-day PHI).

		Product	
		Rate	
Crop	Disease	oz/Acre	Remarks
Cucurbits	Alternaria Leaf Blight	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications on a 7-10
Cantaloupe Chayote	(A. cucumerina)		day interval if conditions remain favorable for disease development.
Chinese	Alternaria Leaf		
waxgourd	Spot		Resistance Management: After 2
Cucumber Gourds	(A. alternate)		applications of Vangard WG, alternate with another fungicide with a different mode of
Honeydew	Gummy Stem		action for 2 applications.
Momordica	Blight		
spp. (Bitter melon,	(Didymella bryoniae)		
Balsam	Diyonae)		
apple)	Powdery Mildew		
Muskmelon	(Sphaerotheca		
Watermelon	fuliginea,		
Pumpkin	Erysiphe		
Squash Zucchini	cichoracearum)		
200011111			
And cultivars			
and/or hybrids			
of these			

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz/A of Vangard WG per year.
- 3) Do not apply more than 1.3 lb ai/A of cyprodinil-containing products per year.
- 4) May be applied up to 1 day before harvest (1-day PHI).

		Product	
		Rate	
Crop	Disease	oz/Acre	Remarks
Herbs* (Dried and fresh)  Basil Chive Coriander, leaves (cilantro) Dillweed Lemongrass Parsley Rosemary Sage Tarragon Thyme	Alternaria leaf spot (Alternaria spp.)  Botrytis leaf blight (Botrytis spp.)	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications on a 7- to 10-day interval if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.

\*Additional Herbs (dried and fresh): Angelica, Balm, Borage, Burnet, Camomile, Catnip, Chervil (dried leaves), Clary, Costmary, Culantro (leaves), Curry (leaves), Horehound, Hyssop, Lavender, Lovage (leaves), Marigold, Marjoram, Nasturtium, Pennyroyal, Rue, Savory (summer and winter), Sweet bay, Tansy, Wintergreen, Woodruff, and Wormwood.

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
- 3) Do not apply within 7 days of harvest (7-day PHI).

	T	Don't 1	T
		Product	
		Rate	
Crop	Disease	oz/Acre	Remarks
Leafy	Alternaria leaf spot	5.5 - 7	Begin applications prior to or at the
Greens	(Alternaria spp.)		onset of disease and repeat
Subgroup 4A	-		applications on a 7- to 10-day
(except	Gray mold		interval if conditions remain
Brassica) and	(Botrytis cinerea)		favorable for disease development.
Leaf Petioles			
Subgroup 4B	Suppression:		Resistance Management: After 2
<b>.</b>	Powdery mildew		applications of Vangard WG,
Amaranth	(Erysiphe		alternate with another fungicide with
Arugula	cichoracearum)		a different mode of action for 2
Cardoon	ĺ		applications.
Celery			
Celery, Chinese			
Celtuce			
Chervil			
Chrysanthemum,			
edible			
Corn salad			
Cress			
Dandelion			
Dock			
Endive (escarole)			
Fennel, Florence			
Lettuce, head and			
leaf			
New Zealand			
spinach			
Orach			
Parsley			
Purslane			
Radicchio			
Rhubarb Spinach			
Spinach vine Swiss chard			
Swiss chard			
And cultivars			
and/or hybrids			
of these			

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- Make no more than two applications by air.
   Do not apply more than 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
   May be applied on the day of harvest (0-day PHI).

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_		Product Rate	
Crop	Disease	oz/Acre	Remarks
Leaves of	Alternaria Leaf	5.5 - 7	Begin applications prior to or at the onset of
Root and	Blight		disease and repeat applications on a 7-10
Tuber	(Alternaria		day interval if conditions remain favorable
Vegetables*	dauci)		for disease development.
Carrot Beet, garden Beet, sugar Parsnip Radish Radish (oriental) Rutabaga Sweet Potato Turnip Yam (true)	Powdery Mildew (Erysiphe spp.)		Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.

<sup>\*</sup>Additional Leaves of Root and Tuber Vegetables: Burdock (edible), Cassava, Celeriac, Chicory, Dasheen, Salsify (including black and Spanish), Tanier, and Turnip rooted chervil.

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Make no more than two applications by air.
- 2) Radish ONLY Make no more than two applications per year.
- 3) Radish ONLY Do not apply more than 14 oz/A of Vangard WG per year.
- 4) Radish ONLY Do not apply more than 0.66 lb ai/A of cyprodinil-containing products per year.
- 5) Do not apply more than 28 oz/A of Vangard WG per year for specified leaves of root and tuber vegetables except radish.
- 6) Do not apply more than 1.3 lb ai/A of cyprodinil-containing products per year for specified leaves of root and tuber vegetables except radish.
- 7) Do not apply within 7 days of harvest (7-day PHI).
- 8) Do not allow cattle or other livestock to feed upon the leaves of root vegetables.

		Product Rate	
Crop	Disease	oz/Acre	Remarks
Bulb Vegetables Crop Group 3-07A and 3-07B  Bulb Onion Chinese onion	Botrytis leaf blight or blast (Botrytis spp.)  Purple blotch (Alternaria porri)	5.5 - 10	Begin applications prior to or at the onset of disease and repeat applications on a 7- to10-day interval if conditions remain favorable for disease development.
Dry bulb onion Daylily bulb Fritillaria bulb Garlic Great-headed garlic	Suppression: Neck rot (Botrytis spp.)		For optimal effect on neck rot, apply on a 7-day schedule at the 10 oz rate.
Lily bulb Pearl onion Potato onion Serpent garlic Shallot			Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.
Green Onion Beltsville bunching onion Chinese chive fresh leaves Fresh chive leaves Fritillaria leaves Fresh onion Green onion Hosta elegans Kurrat Lady's leek Leek Macrostem onion Shallot fresh leaves Tree tops onion Welsh onion tops Wild leek Wild onion  Onions grown for seed  And cultivars and/or hybrids of these			

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 5 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
- 3) Do not apply within 7 days of harvest (7-day PHI).

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		Product	
		Rate	
Crop	Disease	oz/Acre	Remarks
Root Vegetables except Sugar beet*	Alternaria Leaf Blight (Alternaria dauci)	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for disease development.
Carrot Beet, garden Ginseng Horseradish Parsnip Radish Radish (oriental) Rutabaga Turnip	Powdery Mildew (Erysiphe spp.)		Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.

\*Additional Root and Tuber Vegetables: Burdock, edible, Celeriac, Chicory, Salsify (including black and Spanish), Skirret, Turnip-root parsley, and Turnip rooted chervil.

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 5 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Make no more than two applications by air.
- 2) Radish ONLY Make no more than two applications per year.
- 3) Radish ONLY Do not apply more than 14 oz/A of Vangard WG per year.
- 4) Radish ONLY Do not apply more than 0.66 lb ai/A of cyprodinil-containing products per year.
- 5) Do not apply more than 28 oz/A of Vangard WG per year for root vegetables, except sugarbeet and radish.
- 6) Do not apply more than 1.3 lb ai/A of cyprodinil-containing products per year for root vegetables, except sugarbeet and radish.
- 7) Do not apply within 7 days of harvest (7-day PHI).
- 8) Do not allow cattle or other livestock to feed upon the leaves of root vegetables.

		Product Rate	
Crop	Disease	oz/Acre	Remarks
Berry, Low Growing Subgroup 13- 07G (except Cranberry)*	Gray mold (Botrytis cinerea)  Powdery mildew (Sphaerotheca macularis)  Anthracnose (Colletotrichum spp.)	5.5 - 10	Begin application at or before bloom and continue on a 7- to 10-day interval.  Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.
	Root and crown anthracnose at planting (Colletotrichum spp.)	2.5-4 oz per 100 gal water	Apply as a preplant dip to strawberry roots and crowns at the rate of 2.5 to 4 ozper 100 gal of water for suppression of root and crown rot caused by anthracnose. Wash transplants to remove excess soil prior to dipping. This helps to remove adhering spores from the external plant parts. Completely immerse planting stock in dip solution. Dip or expose plants for a minimum of 2 to 5 minutes. DO NOT reuse solution. Dispose of dip solution according to local regulations.  Plant treated plants as quickly as possible. For continued anthracnose control, follow with foliar applications of beginning 2-3 weeks after transplant.

<sup>\*</sup>Additional Low Growing Berries: Bearberry; bilberry; cloudberry; muntries; partridgeberry and cultivars and/or hybrids of these.

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 5 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Make no more than two applications by air.
- 2) Make only one pre-plant dip application per crop.
- 3) Do not apply more than 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
- 4) May be applied on the day of harvest (0-day PHI).

		Product Rate	
Crop	Disease	oz/Acre	Remarks
Fruiting Vegetable Crop Group 8-10*  Eggplant	Early Blight (Alternaria solani)	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for
Groundcherry Pepino Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper) Tomatillo	Grey Mold (Botrytis cinerea)  Powdery Mildew (Leveillula taurica)		disease development.  Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.
Tomatoes			

\*Additional Fruiting Vegetables: African eggplant; bush tomato; cocona; currant tomato; garden huckleberry; goji berry; martynia; naranjilla; okra; pea eggplant; pepino; pepper, nonbell; roselle; scarlet eggplant; sunberry; tree tomato; cultivars, varieties, and/or hybrids of these.

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz/A of Vangard WG per year.
- 3) Do not apply more than 1.3 lb ai/A of cyprodinil-containing products per year.
- 4) Do not apply more than a maximum total of 4 applications (air plus ground plus chemigation) per year.
- 5) May be applied on the day of harvest (0-day PHI).

Crop	Disease	Product Rate oz/Acre	Remarks
Watercress	Cercospora leaf spot (Cercospora spp.)	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications on a 7- to 10-day interval if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.

**Application Instructions:** Application may be made by ground or chemigation. Good coverage is essential for good disease control. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

### **Specific Use Restrictions**

- 1) Do not apply more than 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
- 2) May be applied on the day of harvest (0-day PHI).

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

### **Pesticide Storage**

Keep this product in its tightly closed original container, when not in use. Store in a cool, dry (preferably locked) area that is inaccessible to children and animals.

### **Pesticide Disposal**

Pesticide wastes may be toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

### Container Handling [less than or equal to 50 pounds]

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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For non-emergency (e.g., current product information), call Syngenta Crop Protection at 1-800-334-9481.

Manufactured for: Syngenta Crop Protection, LLC P. O. Box 18300 Greensboro, North Carolina 27419-8300

VANGARD WG 828 MAS 0713 TOL PET-G NOV2013-CLEAN – df – 9/25/15 000100-00828.20131122G.VANGARD\_WG-TOL-1113-CLEAN.PDF

### SUPPLEMENTAL LABELING

### Syngenta Crop Protection, LLC

P. O. Box 18300 Greensboro, North Carolina 27419-8300 SCP 828A-

GROUP 9 FUNGICIDE

Vangard® WG

### **Fungicide**

This supplemental label expires on 09/30/2018 and must not be used or distributed after this date.

Active Ingredient:

Cyprodinil: 4-cyclopropyl-6-methyl-N-phenyl-pyrimidinamine*	75.0%
Other Ingredients:	25.0%
Total:	100.0%

\*CAS No. 121552-61-2

Vangard WG is a water-dispersible granule.

KEEP OUT OF REACH OF CHILDREN.

# **CAUTION**

EPA Reg. No. 100-828

ACCEPTED

Sep 30, 2015

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 100-828

All applicable directions, restrictions and precautions on the EPAregistered label are to be followed. Before using Vangard WG as permitted
according to this Supplemental Labeling, read and follow all applicable
directions, restrictions, and precautions on the EPA-registered label on or
attached to the pesticide product container. This Supplemental Labeling
contains revised use instructions and/or restrictions that may be different
from those that appear on the container label. This Supplemental Labeling
must be in the possession of the user at the time of pesticide application.
It is a violation of Federal Law to use this product in a manner inconsistent
with its labeling.



### **DIRECTIONS FOR USE**

### **Rotational Crop Restrictions**

Do not plant any crop which is not registered for use with cyprodinil for a period of 30 days, unless a shorter interval is specified on the following list.

Rotation Crop	Planting Time From Last Vangard WG Application
Artichoke, Globe	зана 110 г.ррния.
Beans (dried and succulent except cowpeas)	
Berries (bushberries 13-07B, caneberries 13-07A)	
Brassica (Cole) Leafy Vegetables	
Cucurbits	
Herbs (fresh and dried)	
Leafy Vegetables	
Leaves of Root and Tuber Vegetables	0 days
Onions (dry bulb, including garlic, and green)	·
Peppers	
Root Vegetables except Sugar beet	
Strawberries	
Tomatoes and tomatillos	
Watercress	
Crops Not Intended for Food or Feed	
All Other Crops Intended for Food or Feed	30 days

**Restriction:** In annual crops, where multiple crops can be grown per year (double/triple cropping), do not apply more than 1.3 lb ai per acre per year to an individual plot of land.

Crop	Disease	Product Rate oz/Acre	Remarks
Artichoke, Globe	Ramularia leaf spot Ramularia bud spot ( <i>R. cynarae</i> )	5.5 - 7.0	Begin applications prior to disease onset when conditions are conducive for disease. Apply Vangard WG on a 14-day schedule, making no more than 2 sequential applications before alternating to another fungicide with a different mode of action.

**Application Instructions:** For best results, sufficient water volume must be used to provide thorough coverage. Vangard WG can be applied by ground, chemigation, or aerial application. For ground applications, apply in 50-200 gallons of water per acre to obtain coverage without excessive runoff. For aerial applications, use a minimum of 10 gal/A of water. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Do not apply more than 28 oz/A of Vangard WG per year.
- 2) Do not apply more than 1.3 lb ai/A/year of a cyprodinil-containing product.
- 3) Do not apply more than a maximum total of 4 applications (air plus ground plus chemigation) per year.
- 4) Do not apply Vangard WG within 3 days of harvest (3-day PHI).

		Product Rate	
Crop	Disease	oz/Acre	Remarks
Fruiting Vegetable Crop Group 8-10*	Early Blight (Alternaria solani)	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if
Eggplant Groundcherry Pepino	Grey Mold (Botrytis cinerea)		conditions remain favorable for disease development.
Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper) Tomatillo	Powdery Mildew (Leveillula taurica)		Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.
Tomatoes			

<sup>\*</sup>Additional Fruiting Vegetables: African eggplant; bush tomato; cocona; currant tomato; garden huckleberry; goji berry; martynia; naranjilla; okra; pea eggplant; pepino; pepper, nonbell; roselle; scarlet eggplant; sunberry; tree tomato; cultivars, varieties, and/or hybrids of these.

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz/A of Vangard WG per year.
- 3) Do not apply more than 1.3 lb ai/A of cyprodinil-containing products per year.
- 4) Do not apply more than a maximum total of 4 applications (air plus ground plus chemigation) per year.
- 5) May be applied on the day of harvest (0-day PHI).

Crop	Disease	Product Rate oz/Acre	Remarks
Stone Fruits Crop Group 12-12*  Apricots Tart cherries Nectarines Peaches Plums	Brown rot blossom blight (Monilinia spp.)	5	Begin applications at bloom stage (apricots at red bud, cherries at popcorn, peaches and nectarines at pink bud, plums and prunes at green tip). Make a second application at full bloom. Use Vangard WG alone or in tank mixture with the label rate of another fungicide registered for stone fruit.
Prunes	California only	Vangard WG	Apply a maximum of 2 applications of Vangard WG during the preharvest
And cultivars and/or hybrids of these	Fruit brown rot (Monilinia spp.)	alone	period up through 2 days prior to harvest as needed.
		Vangard WG tank mixtures	Apply Vangard WG in tank mixture with the label rate of another fungicide registered on stone fruit for control of fruit brown rot.
		5	

\*Complete List of Stone Fruit: Apricot; Apricot, Japanese; Cherry, tart; Jujube, Chinese; Nectarine; Peach; Plum; Plum, American; Plum, beach; Plum, Canada; Plum, cherry; Plum, Chickasaw; Plum, Damson; Plum, Japanese; Plum, Klamath; Plum, prune; Plumcot; Prune; Sloe; as well as other cultivars and hybrids of these

**Application Instructions:** Application may be made by ground or air. Good coverage is essential for good disease control. Use a minimum of 20 gallons/A spray volume by air. Make no more than two applications by air.

- 1) Do not apply Vangard WG to sweet cherries.
- 2) Make no more than two applications by air.
- 3) Do not apply more than 30 oz/A of Vangard WG (1.4 lb ai/A of cyprodinil) per year.
- 4) Do not apply more than a maximum total of 4 applications (air plus ground) per year.
- 5) Do not apply within 2 days of harvest (2-day PHI).

		Product Rate	
Crop	Disease	oz/Acre	Remarks
Crop Tropical Fruits  Acerola Avocado Black sapote Canistel Dragon Fruit Feijoa Guava Jaboticaba Lychee Longan Mamey sapote	Disease  Botrytis fruit rot (Botrytis spp.)  Alternaria fruit rot (Alternaria spp.)  Anthracnose (Colletotrichum spp.)	<b>oz/Acre</b> 5.5 - 7	Remarks  Make the first application during early bloom and repeat on 7- to 10-day intervals if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.
Mango Papaya Passionfruit Pulasan Rambutan Sapodilla Spanish lime Star apple Starfruit Wax jambu			

### **Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz/A of Vangard WG (1.3 lb ai/A of cyprodinil) per year.
- 3) Do not apply more than a maximum total of 4 applications (air plus ground) per year.
- 4) May be applied on the day of harvest (0-day PHI).

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