

100-828

1/26/2011

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Washington, D.C. 20460

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

Teresa Cox  
Regulatory Product Manager  
Syngenta Crop Protection, Inc.  
PO Box 18300  
Greensboro, NC 27419-8300

JAN 26 2011

Dear Ms. Cox:

SUBJECT: Vanguard WG  
EPA Registration Number 100-828  
Your submission of February 19, 2010 lowering the pomé fruit PHI  
OPPIN decision number 428919

The amendment referred to above, submitted in connection with registration under section (3) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is acceptable provided you make the following changes and submit the studies requested below:

Make these changes to the master label

**Page 8 – Resistance Management – Crop Tolerance:**

Change the sentence: "When possible, it is recommended to test the combinations on a small portion of the crop to ensure that a phytotoxic response will not occur as a result of application." to: "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."

Delete "See precautions regarding apple phytotoxicity."

**Page 10 – Application and Mixing Procedures - Application:**

Change the sentences: "Recommended minimum ground spray volumes are 50 gals./A for tree crops, 30 gals./A for vine crops, and 15 gals./A for field and vegetable crops. For aerial application, see recommendations in the specific crop directions for use." to "Use minimum ground spray volumes of 50 gals./A for tree crops, 30 gals./A for vine crops, and 15 gals./A for field and vegetable crops. For aerial application, see spray volume requirements in the specific crop directions for use."

**Page 11 – “Aerial Spray . . . “ Heading:**

Change the heading “Aerial Spray Recommendations and Precautions” to “Aerial Spray Precautions”

**Page 18 – Crop Use Directions Table - Grapes - Remarks:**

Change the sentence: “Apply Vangard WG in tank mixture with the recommended rate of another fungicide registered on grapes for control of Botrytis bunch rot.” to “Apply Vangard WG in tank mixture with the label rate of another fungicide registered on grapes for control of Botrytis bunch rot.”

**Page 21 – Crop Use Directions Table – Pome Fruit:**

Change the sentence in the “Prebloom” remarks column from: “For scab control utilizing multiple modes of action, apply Vangard WG in tank mixture with the recommended rate of a protectant or systemic fungicide registered on pome fruit.” to “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.”

Change the sentences in the “Pink, bloom, postbloom” remarks column from: “Apply Vangard WG in tank mix combination with the recommended rate of a protectant fungicide. Use of the recommended rate of an EBDC fungicide will broaden the disease control spectrum to include cedar apple rust. The addition of the recommended rate of sulfur or a sterol inhibitor (SI) fungicide to this tank mix will broaden the disease control spectrum to include powdery mildew.” to: “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.”

**Page 22 – Crop Use Directions Table – Stone Fruit:**

Change the sentences in the “Brown rot blossom blight” remarks column from:

“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 recommended rate of another fungicide registered for stone fruit.” to: “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.”

Change the sentences in the “Fruit brown blight” remarks column from: “Apply Vangard WG in tank mixture with the recommended rate of another fungicide registered on stone fruit for control of fruit brown rot.” to: “Apply Vangard WG in tank mixture with the label rate of another fungicide registered on stone fruit for control of fruit brown rot.”

Make these changes to the supplemental label

**Page 2 – Crop Use Directions Table – Pome Fruit:**

Change the sentence in the “Prebloom” remarks column from: “For scab control utilizing multiple modes of action, apply Vangard WG in tank mixture with the recommended rate of a protectant or systemic fungicide registered on pome fruit.” to “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.”

**Page 2 – Crop Use Directions Table – Pome Fruit - continued:**

Change the sentences in the “Pink, bloom, postbloom” remarks column from: “Apply Vanguard WG in tank mix combination with the recommended rate of a protectant fungicide. Use of the recommended rate of an EBDC fungicide will broaden the disease control spectrum to include cedar apple rust. The addition of the recommended rate of sulfur or a sterol inhibitor (SI) fungicide to this tank mix will broaden the disease control spectrum to include powdery mildew.” to: “Apply Vanguard 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.”

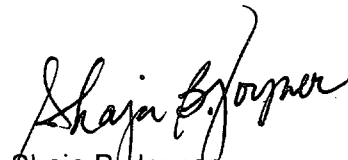
You must submit the following studies as conditions of registration:

1. Immunotoxicity Study (GLN 870.7800) The available preliminary immunotoxicity study is considered Upgradeable/Guideline due to the omission of a NK cell activity assay. You must either submit the assay or provide justification for why it is not needed.
2. Acute Neurotoxicity Study (GLN 870. 6200a)
3. 28-day dermal toxicity study in rats (GLN 870.3200) This study was required in a prior assessment)

Please submit one copy of your final printed labeling before the product is released for shipment. A stamped copy of the label is enclosed for your records.

If you have any questions, please contact Lisa Jones on my team at (703) 308-9424 or [jones.lisa@epa.gov](mailto:jones.lisa@epa.gov).

Sincerely yours,



Shaja B. Joyner  
Product Manager (20)  
Fungicide Branch  
Registration Division (7504P)

- Enclosure: Stamped label
- October 27, 2010, Cyprodinil, Amended Use and Amended Tolerance Petition for Pome Fruit. Summary of Analytical Chemistry and Residue Data
  - December 1, 2010, Cyprodinil – Acute and Chronic Dietary and Drinking Water Exposure and Risk Assessment
  - December 1, 2010, Cyprodinil Human Health Risk Assessment for Amended Use and Amended Tolerance Petition for Pome Fruit.

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GROUP 9 FUNGICIDE

**Vanguard® 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

Vanguard 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  
with COMMENTS  
In EPA Letter Dated:  
JAN 26 2011**

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

100-828

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>NOTE TO PHYSICIAN</b>	
If ingested, induce emesis or lavage stomach. Treat symptomatically.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOT LINE NUMBER</b>	
For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) Call <b>1-800-888-8372</b>	

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**PRECAUTIONARY STATEMENTS**

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**Hazards to Humans and Domestic Animals**

**CAUTION**

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. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

**Handlers applying this product as a preplant 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

**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 immediately if pesticide gets inside. Then wash thoroughly and put on 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.

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**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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**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, Inc. 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

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### PRODUCT INFORMATION

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

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**PRODUCT USE PRECAUTIONS**

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

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**APPLICATION INFORMATION**

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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.

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**PRODUCT USE INSTRUCTIONS**

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**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.

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## RESISTANCE MANAGEMENT

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GROUP	9	FUNGICIDE
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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, it is recommended to test the combinations on a small portion of the crop to ensure that a phytotoxic response will not occur as a result of application. See precautions regarding apple phytotoxicity.

**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 ([http://www.syngentacropprotection-us.com/enviro/driftmanagement/index.asp?nav=drift\\_management](http://www.syngentacropprotection-us.com/enviro/driftmanagement/index.asp?nav=drift_management)).

### 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 Vanguard WG Application
Beans (dried and succulent except cowpeas)* Berries (bushberries, caneberries, juneberry, lingonberry, salal)* Brassica (Cole) Leafy Vegetables* Cucurbits* Herbs (fresh and dried)* Leafy Vegetables (except Brassica and Spinach)* Leaves of Root and Tuber Vegetables* Onions (dry bulb, including garlic, and green) Root Vegetables except Sugar beet* Strawberries Tomatoes and tomatillos Watercress Crops Not Intended for Food or Feed	0 days
All Other Crops Intended for Food or Feed	30 days

\*See the complete crop lists for these groups in CROP USE DIRECTIONS - BERRIES, FRUITS, HERBS AND VEGETABLES section later in this label.

In annual crops, where multiple crops can be grown per year (double/triple cropping), do not apply more than 1.3 lb. a.i. 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.

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

**Vangard WG + Tank Mixtures:** Add  $\frac{1}{2}$  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. Recommended minimum ground spray volumes are 50 gals./A for tree crops, 30 gals./A for vine crops, and 15 gals./A for field and vegetable crops. For aerial application, see recommendations 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 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.**

- 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 Recommendations and Precautions**

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

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 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.
- For aerial applications, mount the spray boom on the aircraft so as to minimize the drift caused by wing tip vortices. Use the minimum practical boom length, which must not exceed 75% of wing span or rotor diameter.
- 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.
- 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.
- Risk of exposure to aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.
- Do not apply when weather conditions favor drift to aquatic areas. Do not apply when gusts or sustained winds exceed 10 mph.
- 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.
- Do not apply during a temperature inversion. Mist or fog may indicate the presence of an inversion in humid areas.

#### **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 Vanguard 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 Vanguard WG. Vanguard 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, quick-closing 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**

**Notes:** (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when chemigating Vanguard 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  $\frac{1}{8}$ - $\frac{1}{2}$  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 Vanguard 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 Vanguard WG required to treat the area covered by the irrigation system.
- Add the required amount of Vanguard 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 Vanguard 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 Vanguard 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 Vanguard WG through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of Vanguard WG required to treat the area covered by the irrigation system.
- Add the required amount of Vanguard 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 Vanguard WG solution has cleared the last sprinkler head.

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**SPECIFIC INSTRUCTIONS FOR PUBLIC WATER SYSTEMS**

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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, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

19/12

**CROP USE DIRECTIONS – TREES, NUTS AND VINES**

Crop	Disease	Rate oz./Acre	Remarks
Almonds	Brown rot blossom blight <i>(Monilinia spp.)</i>  Suppression: Green fruit rot (Jacket rot) <i>(Botrytis cinerea)</i>  Shot hole <i>(Wilsonomyces carpophilus)</i>	5 - 10	Apply Vanguard 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, Vanguard WG will provide suppression of shot hole.  For broad spectrum disease control in tank mixture, apply Vanguard 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 Vanguard 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. Make additional applications by ground.			

**Specific Use Restrictions**

- Make no more than two applications by air.
- Do not apply more than 30 oz./A of Vanguard WG (1.4 lb. a.i./A of cyprodinil) per plot of land per year.
- Do not apply within 60 days of harvest (60 day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<b>Citrus</b>  Lemon Lime	Alternaria Stem End Rot ( <i>A. citri</i> )  Anthracnose ( <i>Colletotrichum gloeosporioides</i> )  Blue Mold ( <i>Penicillium italicum</i> )  Green Mold ( <i>Penicillium digitatum</i> )	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: Make applications by ground. Good coverage is essential for good disease control.			

**Specific Use Restrictions**

- Application may be made by ground only.
- Do not apply more than 7 oz./A of Vanguard WG per plot of land per year.
- Do not apply more than 0.33 lb. a.i./A of cyprodinil containing products per plot of land per year.
- May be applied on the day of harvest (0 day PHI).

Crop	Disease	Rate oz./Acre	Remarks
Grapes	Botrytis bunch rot ( <i>Botrytis</i> spp.)	Vanguard WG alone	Begin applications of Vanguard 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, Vanguard WG will provide significant suppression (approximately 60% control) of powdery mildew.
	Suppression: Powdery mildew ( <i>Uncinula necator</i> )	10	
		Vanguard WG tank mixtures  5 - 10	Apply Vanguard WG in tank mixture with the recommended rate of another fungicide registered on grapes for control of Botrytis bunch rot.
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. Make additional applications by ground.			

**Specific Use Restrictions**

- Make no more than two applications by air.
- Do not apply more than 30 oz./A of Vanguard WG (1.4 lb. a.i./A of cyprodinil) per plot of land per year.
- Do not apply within 7 days of harvest (7 day PHI).

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

**Specific Use Restrictions**

- Make no more than two applications by air.
- Do not apply more than 20 oz. of Vangard WG (0.94 lb. a.i./A of cyprodinil) per plot of land per year.
- May be applied on the day of harvest (0 day PHI).

Crop	Disease	Rate oz./Acre	Remarks
Pistachios	Botrytis ( <i>Botrytis</i> spp.)  Alternaria ( <i>Alternaria</i> <i>alternata</i> )	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. Make additional applications by ground.			

**Specific Use Restrictions**

- Make no more than two applications by air.
- Do not apply more than 28 oz./A of Vanguard WG (1.3 lb. a.i./A of cyprodinil) per plot of land per year.
- Do not apply within 7 days of harvest (7 day PHI).

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

**Specific Use Restrictions**

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



Crop	Disease	Rate oz./Acre	Remarks
<b>Stone Fruits</b> (Including all cultivars and/or hybrids of these)  Apricots Tart cherries Nectarines Peaches Plums Prunes	Brown rot blossom blight ( <i>Monilinia</i> 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 recommended rate of another fungicide registered for stone fruit.
	<b>California only</b>  Fruit brown rot ( <i>Monilinia</i> spp.)	<b>Vangard WG alone</b>  10	Apply a maximum of 2 applications of Vangard WG during the preharvest period up through 2 days prior to harvest as needed.
		<b>Vangard WG tank mixtures</b>  5	Apply Vangard WG in tank mixture with the recommended rate of another fungicide registered on stone fruit for control of fruit brown rot.
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. Make additional applications by ground.			

**Specific Use Restrictions**

- Do not apply Vangard WG to sweet cherries.
- Make no more than two applications by air.
- Do not apply more than 30 oz. of Vangard WG (1.4 lb. a.i./A of cyprodinil) per plot of land per year.
- Do not apply within 2 days of harvest (2 day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<b>Tropical Fruits</b>  Avocado Black sapote Canistel Lychee Longan Mamey sapote Mango Papaya Pulasan Rambutan Sapodilla Spanish lime Star apple	Botrytis fruit rot ( <i>Botrytis</i> spp.)  Alternaria fruit rot ( <i>Alternaria</i> spp.)  Anthracnose ( <i>Colletotrichum</i> spp.)	5.5 - 7	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 Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.
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. Make additional applications by ground.			

**Specific Use Restrictions**

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

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

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Beans (Dried and Succulent except cowpeas)</b></p> <p>Chickpea (garbanzo bean)</p> <p>Bean (<i>Lupinus</i> spp.) (grain lupin, sweet lupin, white lupin, white sweet lupin)</p> <p>Bean (<i>Phaseolus</i> spp.) (kidney, lima, mung, navy, pinto, snap, wax)</p> <p>Broad Bean (fava bean)</p> <p>Bean (<i>Vigna</i> spp.) (asparagus, blackeyed pea)</p>	<p>Gray mold (<i>Botrytis cinerea</i>)</p>	<p>5.5 - 7</p>	<p>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.</p> <p>Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.</p>
<p>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. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.</p>			

**Specific Use Restrictions**

- Make no more than two applications by air.
- Do not apply more 28 oz./A of Vanguard WG (1.3 lb. a.i./A of cyprodinil) per plot of land per year.
- Do not apply within 7 days of harvest (7 day PHI).

28/92

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Berries</b> (Including all cultivars and/or hybrids of these)</p> <p><b>Bushberries</b> Blueberry Currant Elderberry Gooseberry Huckleberry</p> <p><b>Caneberries</b> Blackberry Loganberry Red and Black Raspberry</p> <p><b>Juneberry</b> <b>Lingonberry</b> <b>Salal</b></p>	<p>Mummy berry (<i>Monilinia vaccinicorymbosi</i>)</p> <p>Anthrachnose (<i>Colletotrichum</i> spp.)</p> <p>Alternaria fruit rot (<i>Alternaria tenuissima</i>)</p> <p>Botrytis fruit rot (<i>Botrytis cinerea</i>)</p>	<p>5.5 - 7</p>	<p>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.</p> <p>Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.</p>
<p>Application Instructions: Application may be made by ground or air. 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. Make additional applications by ground.</p>			

**Specific Use Restrictions**

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

29/42

Crop	Disease	Rate oz./Acre	Remarks
<b>Brassica (Cole) Leafy Vegetables</b> (Including all cultivars and/or hybrids of these)  Broccoli Brussels sprouts Cabbage Cabbage, Chinese Cauliflower Collards Kale Mustard greens Turnip greens	Powdery mildew <i>(Erysiphe polygoni)</i>	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 Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.
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. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.			

Additional Cole Vegetables: Broccoli, Chinese, Broccoli raab, Cavalo broccolo, Kohlrabi, Mizuna, Mustard spinach, and Rape greens.

**Specific Use Restrictions**

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

Crop	Disease	Rate oz./Acre	Remarks
<b>Cucurbits</b> Cantaloupe Chayote Chinese waxgourd Cucumber Gourds Honeydew Momordica spp. (Bitter melon, Balsam apple) Muskmelon Watermelon Pumpkin Squash Zucchini  Including cultivars and/or hybrids of these	Alternaria Leaf Blight ( <i>A. cucumerina</i> )  Alternaria Leaf Spot ( <i>A. alternate</i> )  Gummy Stem Blight ( <i>Didymella bryoniae</i> )  Powdery Mildew ( <i>Sphaerotheca fuliginea</i> , <i>Erysiphe cichoracearum</i> )	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.  Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.

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. Make additional applications by ground or chemigation. 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**

- Make no more than two applications by air.
- Do not apply more than 28 oz./A of Vanguard WG per plot of land per year.
- Do not apply more than 1.3 lb. a.i./A of cyprodinil containing products per plot of land per year.
- May be applied up to 1 day before harvest (1 day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Herbs</b> (Dried and fresh)</p> <p>Basil Chive Coriander, leaves (cilantro) Dillweed Lemongrass Parsley Rosemary Sage Tarragon Thyme</p> <p>See additional crops below:</p>	<p>Alternaria leaf spot (<i>Alternaria</i> spp.)</p> <p>Botrytis leaf blight (<i>Botrytis</i> spp.)</p>	<p>5.5 - 7</p>	<p>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.</p> <p>Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.</p>
<p>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. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.</p>			
<p>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.</p>			
<p><b>Specific Use Restrictions</b></p> <ul style="list-style-type: none"> <li>• Do not apply more than 28 oz./A of Vanguard WG (1.3 lb. a.i./A of cyprodinil) per plot of land per year.</li> <li>• Do not apply within 7 days of harvest (7 day PHI).</li> </ul>			

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Leafy Vegetables (except Brassica and Spinach)</b> (Including cultivars and/or hybrids of these)</p> <p>Amaranth Arugula Chervil Chrysanthemum, edible Corn salad Cress Dandelion Dock Endive (escarole) Lettuce, head and leaf Orach Parsley Purslane Radicchio</p>	<p>Alternaria leaf spot (<i>Alternaria</i> spp.)</p> <p>Gray mold (<i>Botrytis cinerea</i>)</p> <p>Suppression: Powdery mildew (<i>Erysiphe cichoracearum</i>)</p>	<p>5.5 - 7</p>	<p>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.</p> <p>Resistance Management: After 2 applications of Vangard WG, alternate with another fungicide with a different mode of action for 2 applications.</p>
<p>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. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.</p>			

**Specific Use Restrictions**

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



Crop	Disease	Rate oz./Acre	Remarks
<b>Leaves of Root and Tuber Vegetables</b>	Alternaria Leaf Blight ( <i>Alternaria dauci</i> )	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 Beet, sugar Parsnip Radish (oriental) Rutabaga Sweet Potato Turnip Yam (true)	Powdery Mildew ( <i>Erysiphe</i> spp.)		Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.
See additional crops below			
Radish			On radish, make no more than two applications per crop.
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. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.			

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

**Specific Use Restrictions**

- Make no more than two applications by air.
- Radish ONLY - do not apply more than 14 oz. per crop or more than 28 oz./A of Vanguard WG per plot of land per year.
- Do not apply more than 28 oz./A of Vanguard WG per plot of land per year.
- Do not apply more than 1.3 lb. a.i./A of cyprodinil containing products per plot of land per year.
- Do not apply within 7 days of harvest (7 day PHI).
- Do not allow cattle or other livestock to feed upon the leaves of root vegetables.

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Onions</b></p> <p>Dry Bulb</p> <p>Green</p> <p>Onions grown for seed</p> <p>Garlic</p>	<p>Botrytis leaf blight or blast (<i>Botrytis</i> spp.)</p> <p>Purple blotch (<i>Alternaria porri</i>)</p> <p>Suppression: Neck rot (<i>Botrytis</i> spp.)</p>	<p>5.5 - 10</p>	<p>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.</p> <p>For optimal effect on neck rot, apply on a 7-day schedule at the 10 oz. rate.</p> <p>Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.</p>
<p>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. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.</p>			

**Specific Use Restrictions**

- Make no more than two applications by air.
- Do not apply more than 28 oz./A of Vanguard WG (1.3 lb. a.i./A of cyprodinil) per plot of land per year.
- Do not apply within 7 days of harvest (7 day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<b>Root Vegetables except Sugar beet</b>	Alternaria Leaf Blight ( <i>Alternaria dauci</i> )	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 (oriental) Rutabaga Turnip	Powdery Mildew ( <i>Erysiphe</i> spp.)		Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.
See additional crops below			
Radish			On radish, make no more than two applications per crop.
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. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.			

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

**Specific Use Restrictions**

- Make no more than two applications by air.
- Radish ONLY - do not apply more than 14 oz. per crop or more than 28 oz./A of Vanguard WG per plot of land per year.
- Do not apply more than 28 oz./A of Vanguard WG per plot of land per year.
- Do not apply more than 1.3 lb. a.i./A of cyprodinil containing products per plot of land per year.
- Do not apply within 7 days of harvest (7 day PHI).
- Do not allow cattle or other livestock to feed upon the leaves of root vegetables.

Crop	Disease	Rate oz./Acre	Remarks
Strawberries	Gray mold ( <i>Botrytis cinerea</i> )	5.5 - 10	Begin application at or before bloom and continue on a 7- to 10-day interval.
	Powdery mildew ( <i>Sphaerotheca macularis</i> )		Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.
	Anthracnose ( <i>Colletotrichum</i> spp.)		
	Root and crown anthracnose at planting ( <i>Colletotrichum</i> spp.)	2.5-4 oz. per 100 gals. water	Apply as a preplant dip to strawberry roots and crowns at the rate of 2.5 to 4 oz. per 100 gals. 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.
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. Make additional applications by ground or chemigation. 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**

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

Crop	Disease	Rate oz./Acre	Remarks
Tomatoes Tomatillos	Early Blight ( <i>Alternaria solani</i> )	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.
	Grey Mold ( <i>Botrytis cinerea</i> )		Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.
	Powdery Mildew ( <i>Leveillula taurica</i> )		
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. Make additional applications by ground or chemigation. 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**

- Make no more than two applications by air.
- Do not apply more than 28 oz./A of Vanguard WG per plot of land per year.
- Do not apply more than 1.3 lb. a.i./A of cyprodinil containing products per plot of land per year.
- May be applied on the day of harvest (0 day PHI).
- **Do not apply to small tomatoes such as cherry or grape type tomatoes in the greenhouse.**

Crop	Disease	Rate oz./Acre	Remarks
Watercress	Cercospora leaf spot ( <i>Cercospora</i> spp.)	5.5 - 7	<p>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.</p> <p>Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.</p>
<p>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.</p>			

**Specific Use Restrictions**

- Do not apply more than 28 oz./A of Vanguard WG (1.3 lb. a.i./A of cyprodinil) per plot of land per year.
- 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**

Store in a cool, dry, secure place.

**Pesticide Disposal**

Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used 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 in proper disposal methods.

**Container Handling [Less Than 5 Gallons]**

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 and 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 incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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Viton® trademark of E.I. du Pont de Nemours and Company

X-77® trademark of Loveland Industries, Inc.

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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, Inc.  
P. O. Box 18300  
Greensboro, North Carolina 27419-8300

VAN WG 828 MAS AMEND 1110-PF - bb - 11-16-10

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**SUPPLEMENTAL LABELING**

Syngenta Crop Protection, Inc.  
P. O. Box 18300  
Greensboro, North Carolina 27419-8300  
SCP 828A-S5 0409

GROUP 9 FUNGICIDE

Vanguard® 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

Vanguard WG is a water-dispersible granule.

KEEP OUT OF REACH OF CHILDREN.

**CAUTION**

EPA Reg. 100-828

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated:  
JAN 26 2011**

*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 EPA-registered label are to be followed. Before using Vanguard WG as permitted according to this supplemental label, 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

### CROP USE DIRECTIONS – TREES, NUTS AND VINES

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

#### Specific Use Restrictions

- When applying to pears, apply Vanguard WG in tank mix only.
- Make no more than two applications by air.
- Do not apply more than 30 oz./A of Vanguard WG (1.4 lb. a.i./A of cyprodinil) per plot of land per year.
- Do not apply within 0 days of harvest (0 day PHI).

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