

100-828

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

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

APR 09 2009

Dear Ms. Cox:

SUBJECT: Vanguard WG  
EPA Registration Number 100-828  
Your submission of November 21, 2008 incorporating recent  
supplemental labels into a master label  
OPPIN decision number 403711

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:

**Page 3 – User Safety Requirements:**

Change the sentence "If no such instructions for washables, use detergent and hot water." to "If no such instructions for washables exist, use detergent and hot water." Place the text "Follow manufacturer's instructions . . . to . . . separately from other laundry." inside a box and entitle the box "User Safety Requirements."

**Page 7 – Rotational Crop Restrictions**

Change the list of crops with "0 days" in the "Planting Time From Last Application . . ." so that it reads

- Beans (dried and succulent except cowpeas) – see crop list on page 19
- Berries (bushberries, caneberries, juneberry, lingonberry, salal) – see crop list on page 20
- Brassica (Cole) Leafy Vegetables – see crop list on page 21
- Cucurbits– see crop list on page 23
- Herbs (fresh and dried) – see crop list on page 24
- Leafy Vegetables (except Brassica and Spinach) – see crop list on page 25
- Leaves of Root and Tuber Vegetables– see crop list on page 26
- Onions (dry bulb, including garlic, and green)
- Root Vegetables except Sugar beet– see crop list on page 28

Strawberries  
Tomatoes and tomatillos  
Watercress

**Pre-Harvest Interval Language:**

Delete the bullet "May be applied on the day of harvest (0 day PHI)" for citrus (page 13), kiwi (page 15), berries (page 20) leafy vegetables (except brassica and spinach) (page 25), strawberries (page 29), tomatoes (page 30), tropical fruits (page 31) and watercress (page 32).

**Pages 29 and 30 – Storage and Disposal:**

Place the Storage and Disposal language (including container language) inside a box.

**Page 31 – Container Handling [Less Than 5 Gallons]**

Replace the text:

"Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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."

with:

"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."

Please submit one copy of your final printed supplemental 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 (7505C)

Enclosure: Stamped label

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**GROUP 9 FUNGICIDE**

**Vangard® WG**

**Fungicide**

For control of certain diseases in fruits, herbs, nuts and vegetables

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  
with COMMENTS  
In EPA Letter Dated:  
APR 09 2009**

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

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<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>	

**PRECAUTIONARY STATEMENTS**

**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 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

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**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

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, 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. 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 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 for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

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**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 consistent with applicable law, all such risks shall be assumed by Buyer and User, and 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. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

To the extent consistent with applicable law, neither SYNGENTA or Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH 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 Limitations of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

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## 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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### GENERAL 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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**GENERAL USE PRECAUTIONS**

**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.

<b>Rotation Crop</b>	<b>Planting Time From Last Vanguard WG Application</b>
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 Watercress Crops Not Intended for Food or Feed	0 days
All Other Crops Intended for Food or Feed	30 days

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.

Aerial use is for California only. Make no more than one aerial application per season. For the crops to which aerial applications are allowed, refer to the specific crop directions for use.

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

**NOTICE: UNDER CONDITIONS CONDUCIVE TO EXTENDED INFECTION PERIODS, ADDITIONAL FUNGICIDE APPLICATIONS BEYOND THE NUMBER ALLOWED BY THIS LABEL MAY BE NEEDED. UNDER THESE CONDITIONS, USE ANOTHER FUNGICIDE REGISTERED FOR THE CROP/DISEASE APPEARING ON THIS LABEL.**

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## RESISTANCE MANAGEMENT

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

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## APPLICATION INSTRUCTIONS

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For best disease control, apply Vanguard 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 avoid spray drift, do not apply when conditions favor drift beyond the target area. Avoid spray overlap, because crop injury may occur.

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.

**Chemigation:** Do not apply this product through any type of irrigation system.

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**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.
- 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.
- Shut off the sprayer when row ends.
- Spray last three rows windward of aquatic areas using nozzles on one side only, with spray directed away from aquatic areas. Avoid spray going over the tops of trees by adjusting or turning off top nozzles. 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.
- 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.

**Aerial Spray Recommendations and Precautions**

Aerial use is for California only. Make no more than one aerial application per season.

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.

- 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, the spray boom should be mounted on the aircraft so as to minimize the drift caused by wing tip vortices. The minimum practical boom length should be used, and must not exceed 75% of wing span or rotor diameter.

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- 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.
- Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy must be avoided.
- 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.

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## MIXING PROCEDURES

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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.

**Vanguard 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 Vanguard 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.

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When using Vanguard WG in tank mixtures, add all products in water-soluble packaging to the tank before any other tank mix partner, including Vanguard 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 Vanguard 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. Vanguard 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:** Vanguard WG is compatible with most crop protection additives. Do not use X-77® with Vanguard WG for bloom sprays applied to stone fruits, almonds and pistachios.

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

Crop	Disease	Rate oz./Acre	Remarks
Almonds	Brown rot blossom blight ( <i>Monilinia</i> spp.)  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.

**Specific Use Restrictions**

- Application may be made by ground. Aerial application in California only. Make no more than one application by air. Use a minimum of 20 gallons/acre spray volume by air. Make additional applications by ground up to the maximum allowable a.i./A per plot of land per year.
- 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).

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Crop	Disease	Rate oz./Acre	Remarks
Citrus  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.

**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).

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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.

**Specific Use Restrictions**

- Application may be made by ground. Aerial application in California only. Make no more than one application by air. Use a minimum of 20 gallons/acre spray volume by air. Make additional applications by ground up to the maximum allowable a.i./A per plot of land per year.
- 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).



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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.

**Specific Use Restrictions**

- Application may be made by ground. Aerial application in California only. Make no more than one application by air. Use a minimum of 20 gallons/acre spray volume by air. Make additional applications by ground up to the maximum allowable a.i./A per plot of land per year.
- 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).

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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.

**Specific Use Restrictions**

- Application may be made by ground. Aerial application in California only. Make no more than one application by air. Use a minimum of 20 gallons/acre spray volume by air. Make additional applications by ground up to the maximum allowable a.i./A per plot of land per year.
- 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).

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Crop	Disease	Rate oz./Acre	Remarks
Pome Fruits  Apples Crabapples Loquat Mayhaw Pears (see tank mixture instructions) Quince	Prebloom	Vanguard WG alone	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.)	5	
			Vanguard WG tank mixtures
		3 - 5	
	Pink, bloom, post-bloom	Vanguard WG tank mixtures	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.
	Scab ( <i>Venturia</i> spp.)	3 - 5	

**Specific Use Restrictions**

- In pears, apply Vanguard WG in tank mix only.
- Application may be made by ground. Aerial application in California only. Make no more than one application by air. Use a minimum of 20 gallons/acre spray volume by air. Make additional applications by ground up to the maximum allowable a.i./A per plot of land per year.
- 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 72 days of harvest (72 day PHI).

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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 Vanguard 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>Vanguard WG alone</b>  10	Apply a maximum of 2 applications of Vanguard WG during the preharvest period up through 2 days prior to harvest as needed.
		<b>Vanguard WG tank mixtures</b>  5	Apply Vanguard WG in tank mixture with the recommended rate of another fungicide registered on stone fruit for control of fruit brown rot.

**Specific Use Restrictions**

- Do not apply Vanguard WG to sweet cherries.
- Application may be made by ground. Aerial application in California only. Make no more than one application by air. Use a minimum of 20 gallons/acre spray volume by air. Make additional applications by ground up to the maximum allowable a.i./A per plot of land per year.
- Do not apply more than 30 oz. of Vanguard 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).

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

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Beans</b> <b>(Dried and Succulent except cowpeas)</b></p> <p>Chickpea (garbanzo bean). Bean (<i>Lupinus</i> spp.) (grain lupin, sweet lupin, white lupin, white sweet lupin) Bean (<i>Phaseolus</i> spp.) (kidney, lima, mung, navy, pinto, snap, wax) Broad Bean (fava bean) 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>

**Specific Use Restrictions**

- Application may be made by ground only.
- 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).

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Crop	Disease	Rate oz./Acre	Remarks
<b>Berries</b> (Including all cultivars and/or hybrids of these)	Mummy berry <i>(Monilinia vacciniicorymbosi)</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.
<b>Bushberries</b> Blueberry Currant Elderberry Gooseberry Huckleberry	Anthracnose <i>(Colletotrichum spp.)</i>		Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.
<b>Caneberries</b> Blackberry Loganberry Red and Black Raspberry	Alternaria fruit rot <i>(Alternaria tenuissima)</i>		
<b>Juneberry</b> <b>Lingonberry</b> <b>Salal</b>	Botrytis fruit rot <i>(Botrytis cinerea)</i>		

**Specific Use Restrictions**

- Application may be made by ground. Aerial application in California only. Make no more than one application by air. Use a minimum of 5 gallons/acre spray volume by air. Make additional applications by ground up to the maximum allowable a.i./A per plot of land per year
- 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).

23/35

Crop	Disease	Rate oz./Acre	Remarks
<b>Brassica (Cole) Leafy Vegetables</b> (Including all cultivars and/or hybrids of these)  Broccoli Broccoli, Chinese Broccoli raab Brussels sprouts Cabbage Cabbage, Chinese Cauliflower Cavalo broccolo Collards Kale Kohlrabi Mizuna Mustard greens Mustard spinach Rape 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.

**Specific Use Restrictions**

- Application may be made by ground only.
- 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).

24/35

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</i> <i>bryoniae</i> )  Powdery Mildew ( <i>Sphaerotheca</i> <i>fuliginea</i> , <i>Erysiphe</i> <i>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.

**Specific Use Restrictions**

- Application may be made by ground only.
- 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).



25/35

Crop	Disease	Rate oz./Acre	Remarks
<b>Herbs</b> (Dried and fresh)  Angelica Balm Basil Borage Burnet Camomile Catnip Chervil, dried leaves Chive Clary Coriander, leaves (cilantro) Costmary Culantro, leaves Curry, leaves Dillweed Horehound Hyssop Lavender Lemongrass Lovage, leaves Marigold Marjoram Nasturtium Parsley, dried leaves Pennyroyal Rosemary Rue Sage Savory, summer and winter Sweet bay Tansy Tarragon Thyme Wintergreen Woodruff Wormwood	Alternaria leaf spot ( <i>Alternaria</i> spp.)  Botrytis leaf blight ( <i>Botrytis</i> 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 Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.

**Specific Use Restrictions**

- Application may be made by ground only.
- 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).

26/35

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 Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.</p>

**Specific Use Restrictions**

- Application may be made by ground only.
- 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).



28/35

Crop	Disease	Rate oz./Acre	Remarks
Onions Dry Bulb Green Onions grown for seed	Botrytis leaf blight or blast ( <i>Botrytis</i> spp.)  Purple blotch ( <i>Alternaria porri</i> )	5.5 - 10	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.  For optimal effect on neck rot, apply on a 7-day schedule at the 10 oz. rate.
Garlic	Suppression: Neck rot ( <i>Botrytis</i> spp.)		Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.

**Specific Use Restrictions**

- Application may be made by ground only.
- 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).

29/35

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.
Burdock, edible Carrot Celeriac Chicory Beet, garden Ginseng Horseradish Parsnip Radish (oriental) Rutabaga Salsify (including black and Spanish) Skirret Turnip Turnip-root Parsley Turnip rooted chervil	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.
Radish			On radish, make no more than two applications per crop.

**Specific Use Restrictions**

- Application may be made by ground only.
- 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> )  Anthracnose ( <i>Colletotrichum spp.</i> )		Resistance Management: After 2 applications of Vanguard WG, alternate with another fungicide with a different mode of action for 2 applications.
	Root and crown anthracnose at planting ( <i>Colletotrichum spp.</i> )	2.5-4 oz. per 100 gals. water	Apply as a pre-plant 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.

**Specific Use Restrictions**

- Application may be made by ground. Aerial application in California only. Make no more than one application by air. Use a minimum of 5 gallons/acre spray volume by air. Make additional applications by ground up to the maximum allowable a.i./A per crop.
- 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).

31/35

Crop	Disease	Rate oz./Acre	Remarks
Tomatoes Tomatillos	Early Blight ( <i>Alternaria solani</i> )  Grey Mold ( <i>Botrytis cinerea</i> )  Powdery Mildew ( <i>Leveillula taurica</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.

- Specific Use Restrictions**
- Application may be made by ground only.
  - 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.**

32/35

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 spp.)</i>  Alternaria fruit rot <i>(Alternaria spp.)</i>  Anthracnose <i>(Colletotrichum spp.)</i>	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.

**Specific Use Restrictions**

- Application may be made by ground. Aerial application in California only. Make no more than one application by air. Use a minimum of 20 gallons/acre spray volume by air. Make additional applications by ground up to the maximum allowable a.i./A per plot of land per year.
- 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).



33/35

Crop	Disease	Rate oz./Acre	Remarks
Watercress	Cercospora leafspot ( <i>Cercospora</i> 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.

**Specific Use Restrictions**

- Application may be made by ground only.
- 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).

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## STORAGE AND DISPOSAL

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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 and drain for 10 seconds after the flow begins to drip. 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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