



81943-43

2/16/2011

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	U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7505P) Ariel Rios Building 1200 Pennsylvania Ave., NW Washington, D.C. 20460	EPA Registration. Number: 81943-43	Date of Issuance: FEB 16 2011
	NOTICE OF PESTICIDE: <input checked="" type="checkbox"/> Registration <input type="checkbox"/> Reregistration (under FIFRA, as amended)	Term of Issuance: Conditional	
		Name of Pesticide Product: Vireo WDG	
Name and Address of Registrant (include ZIP Code): Phoenix Environmental Care, LLC PO Box 370 Valdosta, GA 31603-0370			
Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.			
<p>On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.</p> <p>This product is conditionally registered in accordance with FIFRA sec. 3 (c) (7) (A) provided that you:</p> <ol style="list-style-type: none">1. Submit/cite all data required for the registration/ reregistration of your product when the Agency requires all registrants of similar products to submit data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.2. Make the following label changes:<ol style="list-style-type: none">a. Change the EPA Registration Number to 81943-43 <p style="text-align: right;">(Continued)</p>			
Signature of Approving Official:  Mary L. Waller, Product Manager 21 Fungicide Branch Registration Division (7504P)		Date: 2/16/2011	

2. Label Changes (continued)

b. Page 4 – Product Information

Reformat the last line of the paragraph beginning “Maximum usage when applying metalaxyl . . . “so it does not trail across the page.

c. Pages 4 and 5 – Product Information

Rearrange the first five paragraphs as follows:

First – “Vireo WDG is a systemic fungicide for use . . . “

Second – “Maximum usage when applying . . . “

Third – “This product is not to be used . . . “

Fourth – “This label is for field use only . . . ”

Fifth – “Resistance Management: Vireo WDG is a systemic fungicide having a specific mode . . . “

d. Page 8 – Application Instructions:

Change the first sentence under the “Application Instructions” heading to “Vireo WDG must be applied on the schedule specified in the specific crop use directions, not according to the irrigation schedule.”

e. Page 15 – Leafy Vegetables – Surface Application

Unbold the word “needed” in the third sentence.

f. Page 15 – Legume Vegetables –Pythium Damping-Off

Change the sentence: “Applications may be made preplant incorporated, or at a soil surface spray after planting.” to “Applications may be made preplant incorporated, or at a soil surface spray at planting.”

g. Page 16 – Onions etc. – Surface Application

Remove the line break after “. . . before the seeds start . . . “

h. Page 18 – Peppers and Eggplant

Add “Do not use Vireo WDG for disease control in greenhouses or field-grown vegetable bedding plants.”

i. Page 19 – Root and Tuber Vegetables

Remove the line break after “. . . before the seeds start . . . “

j. Page 20 – Stone Fruits, etc.

Delete the sentence “Do not apply within 12 months of harvesting citrus fruit for food or feed.”

k. Page 21 – Stone Fruits, etc.

Change item (3) of the Note at the end of this section to “Do not apply within 12 months of harvesting fruit or nuts for food or feed.”

l. Page 27 – Ornamentals Application Table

Delete the bold “V” under Woody Ornamentals other than Azaleas.

- m. **Page 28 – Citrus in Nurseries and Landscape Plantings (Nonbearing)**
In the Note at the end of this section, delete the phrase "... intended for commercial fruit production."
- n. **Page 28 – Conifers in Nurseries and Plantations etc**
Remove the line break after "... ½ to ... "
- o. **Page 29 – Deciduous Fruits and Nuts in Nurseries**
Add a space after "per" in the beginning of the sentence "Apply 3 oz per ... "

3. Provide the following as conditions of registration:

- a. OPPTS number 830.6317 - storage stability - due June 1, 2012
- b. OPPTS number 830.6320 - corrosion characteristics - due June 1, 2012

4. Submit one (1) copy of the revised final printed label before the product is released for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records. If you have any questions, contact Lisa Jones of my team at (703) 308-9424 or jones.lisa@epa.gov.

Sincerely,



Mary L. Waller
Product Manager (21)
Fungicide Branch
Registration Division (7504P)

Enclosure: Stamped copy of label
Product chemistry review dated January 3, 2011
Acute toxicity review dated January 11, 2011

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Vireo WDG draft label
February 15, 2011 rev. 4

Without Post-Emergence Uses – clean copy

VIREO WDG **Metalaxyl Fungicide**

Active Ingredient:

Metalaxyl: N-(2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester50.0%

Other Ingredients50.0%

Total:100.0%

KEEP OUT OF REACH OF CHILDREN **CAUTION**

FIRST AID	
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
<p>Note to Physician: Consideration should be given to gastric lavage with an endotracheal tube in place. A slurry of activated charcoal in water may be left in stomach. Give a saline laxative followed by symptomatic and supportive care.</p>	
<p>EMERGENCY TELEPHONE NUMBERS: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact: FOR 24- HOUR EMERGENCY MEDICAL ASSISTANCE CALL: 1-888-875-1724. FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.</p>	

Net Contents: ____ lbs.

Phoenix Environmental Care, LLC
PO Box 370, Valdosta, GA 31603-0370

EPA Reg. No. 81943-~~40~~⁴³
EPA Est. No.: _____

ACCEPTED
with COMMENTS
In EPA Letter Dated:
FEB 16 2011

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PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
CAUTION

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

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves (such as Barrier laminate, Nitrile Rubber, Neoprene Rubber, Viton, Selection Category E),
- Shoes plus socks.

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

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Apply only as specified on this label. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

Groundwater Advisory Statement

Metalaxyl is known to leach through soil into groundwater under certain conditions as a

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result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

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 (WPS), 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 48 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the WPS 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.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others or pets to enter the treated area until sprays have dried.

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

PRODUCT INFORMATION

Maximum usage when applying both metalaxyl and mefenoxam containing products to the same crop within the same season: Do not apply more than the maximum seasonal total for the active ingredient as stated on the label of the product containing the lowest seasonal total on that crop.

Vireo WDG is a systemic fungicide for use on selected crops to control certain diseases caused by members of the Oomycete class of fungi. Other fungicides must be used to control diseases incited by other classes of fungi.

THIS PRODUCT IS NOT TO BE USED IN FOLIAR APPLICATIONS UNLESS SPECIFIED ON THIS LABEL OR IN SOLUTIONS USED TO DIP PLANTS.

Resistance Management: **Vireo WDG** is a systemic fungicide having a specific mode of action and could be subject to development of insensitive strains of fungi. Development of insensitivity cannot be predicted. If treatment is not effective following the use of **Vireo WDG** as specified, an insensitive strain of fungi may be present. If the treatment is ineffective due to the presence of a **Vireo WDG** insensitive strain of fungi, neither **Vireo WDG** nor any other fungicide with similar action will effectively control that disease. Consideration should then be given to the prompt use of other types of suitable fungicides. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance on your particular crop and disease control situation.

THIS LABEL IS FOR FIELD USE ONLY AND IS NOT FOR USE ON TRANSPLANT TRAYS, GREENHOUSES, LATH HOUSES, FLOAT HOUSES, HYDROPONIC PRODUCTION, OR IN BEDDING PLANT STRUCTURES.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, as crop injury may result.

Where rate ranges are specified on this label, use the higher rate when heavy disease pressure is expected and the lower rate when disease pressure is expected to be light unless otherwise noted.

ATTENTION: 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.

Conditions conducive to extension of infection periods include: (1) a cool and wet environment or Pythium seeding disease, (2) long growing seasons, (3) a cool and humid environment for downy mildew and (4) use of susceptible varieties.

Mixing Instructions

Vireo WDG is usually compatible with Kestrel MEX, Pegasus Brand chlorothalonil products, WingMan brand mancozeb products, azoxystrobin based products, and metolachlor based products.

To assure the compatibility of **Vireo WDG** with these and other products, pour the products into a small container of water in the correct proportions. After thorough mixing, let stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture should be considered compatible.

Prepare no more spray mixture than is required for the immediate operation. Agitate the spray solution continuously during mixing and during application. Rinse the spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

Vireo WDG Alone

Add $\frac{1}{4}$ - $\frac{1}{2}$ of the required amount of water to the spray tank. With the agitator running, add the **Vireo WDG** to the tank. Continue agitation while adding the remainder of the water. Begin application of the spray solution after the **Vireo WDG** has completely dispersed into the mix water. Maintain agitation until all the mixture has been sprayed.

Vireo WDG + Tank Mixtures

Add $\frac{1}{4}$ - $\frac{1}{2}$ of the required amount of water to the spray tank. Start the agitator before adding any tank mix partners. In general, tank mix partners should be added in this order: wettable powders, dry flowable formulations, liquid flowable formulations, microencapsulated formulations, 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 and the **Vireo WDG** to the spray tank. Allow the **Vireo WDG** to completely disperse into the mix water. Maintain agitation until all of the mixture has been sprayed.

NOTE: When using **Vireo WDG** in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank mix partner, including **Vireo WDG**. 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 **Vireo WDG** in a tank mixture, observe all directions for use, sites, use rates, dilution ratios, precautions and limitations which appear on the tank mix partner label. No label dosage may be exceeded and the most restrictive label precautions and limitations must be followed. This product may 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 products are registered.

Application Instructions

For banded applications, calculate the amount of **Vireo WDG** needed as follows:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre}$$

Application Through Irrigation Systems

Vireo WDG alone or in tank mixture with other pesticides registered for application through irrigation systems may be applied in irrigation water at rates recommended on this label. This product may be applied through micro sprinkler or drip irrigation systems. Do not apply this product through any other type of irrigation system. Plant injury or lack of effectiveness may result from nonuniform distribution of treated water. 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 label-prescribed safety devices for public water supplies are in place. A person knowledgeable of the chemigation system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.

Vireo WDG can be injected into the irrigation line in concentrated form, or diluted with water or liquid fertilizer solutions with pH levels less than 7.5. If diluted, a pesticide supply tank should be used. Agitation is not needed unless the diluted solution will remain in the supply tank more than 24 hours. **Vireo WDG** is normally diluted at a ratio of 10:1 to 50:1, depending on injection setups. Injecting a larger volume of a more dilute mixture will usually allow a more accurate calibration of the metering equipment. Meter the fungicide into the irrigation water during the first part of the irrigation cycle.

NOTE: **Vireo WDG** is highly corrosive to seals and other pump components. Recommended components are Teflon, polyethylene, polypropylene and nylon. When **Vireo WDG** is diluted at least 50:1, silicone rubber and viton can be used. Do not use

PVC or EPDM based components.

Safety Devices for Irrigation Systems Connected to Public Water Supplies

If the source of water for your irrigation system is a public water supply, follow the instructions below.

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, 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.

Safety Devices for Irrigation Systems Not Connected to a Public Water Supply

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 irrigation system is either automatically or manually shut down.

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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 functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where the 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.

Application Instructions

Vireo WDG must be applied on the schedule specified in the use recommendations, not according to the irrigation schedule.

The following calibration and application techniques are provided for the user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Users should check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

General Instructions

1. Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters in all system are putting out the same amount of water.
2. Only pressure injection or venture equipment is recommended.
3. Determine the area to be treated in each irrigation run.
4. Measure the output of each of the emitters or drip tubes closest to and farthest from the injector site.
5. For calibration, substitute a concentrated detergent (such as Wisk) for the **Vireo 2E** in the injector tank. It is important to use the same volume of soap solution as the planned volume of **Vireo WDG** solution when calibrating the system. The detergent will bubble as it leaves the emitters. The time period over which the bubbles occur should be checked for both the closest and farthest emitters. If these times are not within 2 minutes of each other, adjust the dilution ratio and/or the injection rate.

Step-by-Step Instructions

1. Before starting to calibrate, operate the system until all the emitters are putting out at equal flow rates or until the system is operating at full pressure.
2. Make up an indicator solution of detergent or fertilizer, using the same ratio to be used with mixing **Vireo WDG**.
3. Set the injector to apply the indicator solution at the injection rate to be used in the actual **Vireo WDG** application.

4. Attach a 5-inch length of flexible tubing over the emitter closest to the injection point, another length over the emitter farthest away. Both emitters should be monitored to determine the time intervals that the indicator solutions are observed.
5. Begin injecting the indicator solution. Direct the flow from the tubes at the emitters into a small container. Begin timing when the indicator solution is first detected, stop timing when the indicator solutions are no longer detected.
6. If the period of detection of the indicator solution between the 2 emitters are within 2 minutes of each other, comparable coverage will be obtained. If they are not, make adjustments by increasing the dilution ratio, using more water per part of **Vireo WDG**, or adjust the injector to a slower flow rate.
7. Once the system is calibrated, dilute the needed amount of **Vireo WDG** with water using a minimum of 15 parts water to 1 part of **Vireo WDG** in the solution tank.
8. Do not begin to inject **Vireo WDG** into the system until all emitters are producing equal flow rates, or until the system is at full pressure.
9. Inject the **Vireo WDG** into the system at the beginning of the irrigation set in $\frac{1}{2}$ — 1 inch of irrigation water.

ALFALFA*

*Including birdsfoot trefoil

Apply Vireo WDG to the soil at planting to control damping-off caused by *Pythium* spp. and root rots caused by *Phytophthora* spp.

Stand Establishment

Apply $\frac{1}{2}$ - 1 lb. per acre as a broadcast surface spray at planting in a minimum of 20 gals. of water.

If alfalfa seed was previously treated with a metalaxyl or mefenoxam seed treatment product, apply $\frac{1}{2}$ lb. per acre of Vireo WDG at planting. Use the higher rate (1 lb. per acre) in areas where disease pressure is expected to be heavy.

NOTE: To avoid possible illegal residues, do not feed green forage or cut hay for 60 days following application.

BERRIES

Blueberries

Use of **Vireo WDG** will aid in the control of root rot caused by *Phytophthora* spp. when used in conjunction with good cultural practices to minimize disease problems. **Vireo WDG** will not revitalize plants showing moderate to severe root rot symptoms.

New Plantings: Apply 8 lbs. per acre broadcast to the soil at planting. For banded applications, an 18-inch band over the row is recommended. Use the formula in the **Product Information** section of the label to calculate the amount needed per acre. Do not use after planting.

CITRUS

Includes grapefruits, lemons, limes, oranges, tangelos, tangerines, citrus citron, kumquats, satsuma mandarin and hybrids of these. Do not apply within 12 months of harvesting citrus fruit for food or feed.

Use **Vireo WDG** on citrus for control of citrus foot rot, root rot, and trunk cankers caused by *Phytophthora* spp. Apply Vireo WDG only at planting. If trees are on a drip irrigation system, distribute the amount of **Vireo WDG** needed per tree (see tables) to the soil directly under the drip emitters at each tree. If there is more than one emitter per tree, distribute the total amount of **Vireo WDG** needed among the emitters.

NOTE: (1) Do not apply to plantings that will bear harvestable fruit within 12 months of the last application, or possible illegal residues may result. (2) To avoid injury, do not use **Vireo WDG** to dip or spray tree roots. Do not concentrate it around the tree trunks. (3) Do not apply to trees under stress. (4) For intense plantings (2 to 3 times the normal planting rate), make applications on a per area basis, i.e. per acre or 1,000 sq. ft. Do not calculate the amount of **Vireo WDG** on a per tree basis. (5) In California, do not apply **Vireo WDG** to newly planted trees within 90 days of planting. (6) Do not apply more than 24 lbs. of **Vireo WDG** per treated acre per year.

NOTE: Where nematodes are a problem, best results can be achieved if effective EPA-registered nematicides are used. Nematicides can be used in combination or in sequence with the single Vireo WDG application.

Use Precaution: For best *Phytophthora* control, a combination of cultural practices and resistant varieties is recommended. The use of **Vireo WDG** is not recommended in Florida for use on the highly susceptible sweet orange rootstock.

Citrus in Nurseries (Arizona, California, Florida and Puerto Rico Only)

Apply Vireo WDG once, at the time of planting, by soil drench or by soil surface spray as described below. For banded applications, use a band wide enough to cover the root systems of the plants. Do not apply **Vireo WDG** solutions to bare roots.

Soil Drench: Apply 2 to 3 oz. per 100 gals. of water as a drench over the row at a rate of 100- 250 gals. per 1,000 feet of row. The width of the drench treatment should be wide enough to cover the root systems of the plants. Follow with ½ to 1 inch irrigation over the treated area.

Soil Surface Spray: Apply 4 to 8 lbs. per treated acre in a broadcast or banded surface spray to seedbeds, liners, or bedded stock in sufficient water to obtain thorough coverage. If applications are banded, the treated area should be wide enough to cover the root systems of the plants. Follow applications with a ½ to 1 inch irrigation over the treated area.

NOTE: Do not use **Vireo WDG** for disease control in greenhouse nurseries.

Citrus Resets or New Plantings (Arizona, California, Florida and Puerto Rico Only)

Apply Vireo WDG once, at the time of planting or transplanting, by water ring drench or by soil surface spray as described below.

Water Ring Drench: Mix 2 to 3 oz. per 100 gals. of water. Apply 5 gals. of the mix around the base of each tree within the watering ring.

Soil Surface Spray (Arizona and California Only): Apply 4 to 8 lbs. per treated acre (1 ½ to 3 oz. per 1,000 sq. ft.) in sufficient water to obtain uniform coverage of the soil surface. Apply spray to the soil surface beneath the tree canopy or apply through irrigation water. If natural rainfall is not expected within three days of a soil surface application, irrigate with ½ to 1 inch water over the treated area. See instructions below for application through irrigation water.

Soil Surface Spray (Florida and Puerto Rico Only): Apply 4 lbs. per treated acre (1 ½ oz. per 1,000 sq. ft.) under the canopy of the tree. Applications may be made through low volume irrigation systems at the rate of 1 lb. per grove acre for trees less than 5 years old.

CLOVER

Apply Vireo WDG to the soil at planting to control damping-off caused by *Pythium* spp. and root rots caused by *Phytophthora* spp.

Stand Establishment

Apply ½ to 1 lb. per acre as a broadcast surface spray at planting in a minimum of 20 gals. of water. If seed was previously treated with a metalaxyl or mefenoxam seed treatment product, apply Vireo WDG at ½ lb. per acre at planting. Use the higher rate (1 lb. per acre) in areas where disease pressure is expected to be heavy.

NOTE: To avoid possible illegal residues, do not feed green forage or cut hay for 90 days following application.

COLE CROPS [Broccoli, Cabbage, Cauliflower, Chinese broccoli, Gailon. White flowering broccoli, and Chinese cabbage (Napa, Bok Choy)]

Apply Vireo WDG to the soil at planting to control damping-off caused by *Pythium* spp. arid basal stem rot caused by *Phytophthora* spp. Applications may be made preplant incorporated or as a soil surface spray after planting.

Preplant Incorporated Application: Apply 2 to 4 lbs. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For control of *Pythium* damping-off only use ½ to 1 lb. per acre. For banded applications, a 7-inch band is recommended. Use the formula in the **Product**

Information section of this label to calculate the amount of **Vireo WDG** needed per acre.

Surface Application: Apply 2 to 4 lbs. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate Vireo WDG before planting or move it into the seed zone after planting with ½ to 1 inch sprinkler irrigation.

NOTE: (1) Do not use **Vireo WDG** for disease control in greenhouse crops or field-grown vegetable bedding plants. (2) Do not dip plants in solutions containing **Vireo WDG**, or crop injury may occur. (3) Do not use **Vireo WDG** as a transplant water treatment. (4) **Vireo WDG** may be tank mixed with pentachloronitrobenzene to control club root (*Lasmodiophora brassicae*) or wirestem/black root (*Corticium solani*) Before applying observe all precautions, limitations, rates and directions for use including the need for incorporation on the pentachloronitrobenzene label.

COTTON

Seed Rots and Seedling Diseases of Cotton Caused by *Pythium* spp.

Apply ⅛ to ¼ lb. per 13,000 linear feet of row (0.15 – 0.3 oz. per 1,000 linear ft.) as an in-furrow spray in 5 to 15 gals. of water or liquid fertilizer at planting. Mount the spray nozzle so the spray is directed into the furrow over the seed just before the seeds are covered.

For control of *Pythium* and *Rhizoctonia* apply 1 to 2 lbs. pentachloronitrobenzene 2E or ⅔ to 1 ¾ lbs. pentachloronitrobenzene 75W per 13,000 linear ft. of row in tank mixture with **Vireo WDG**.

NOTE: When **Vireo WDG** is applied with pentachloronitrobenzene 2E or pentachloronitrobenzene 75W, observe all precautions and restrictions that appear on the

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pentachloronitrobenzene 2E or pentachloronitrobenzene 75W labels.

CUCURBIT VEGETABLES

Includes balsam pear (bitter melon), Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, gherkin, edible gourds, cantaloupe, casaba, crenshaw, honeydew melon, honey balls, mango melon, muskmelon, Persian melon, pumpkin, summer squash, winter squash, watermelon, and cucurbit hybrids only.

Apply Vireo WDG at planting to provide control of damping off and cottony leak caused by *Pythium* spp. Applications may be made preplant incorporated or as a soil surface spray at planting.

Preplant Incorporated Application: Apply 2 to 4 lbs. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre.

Surface Application: Apply 2 to 4 lbs. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended.

Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. If natural rainfall, is not expected before the seeds start germinating, mechanically incorporate Vireo WDG before planting or move it into the seed zone after planting with ½ to 1 inch sprinkler irrigation.

NOTE: (1) Do not use **Vireo WDG** for disease control in greenhouse or field-grown vegetable bedding plants. (2) Do not dip plants in solutions containing **Vireo WDG** or crop injury may occur. (3) Do not use **Vireo WDG** as a transplant water treatment.

DECIDUOUS FRUITS AND NUTS IN ORCHARDS (Nonbearing)

* For bearing Deciduous Fruits & Nuts, see **Directions for Use** under the **Apples and Stone Fruits, Walnuts and Almonds** sections of this label.

Phytophthora Diseases

Use of **Vireo WDG** will aid in the control of crown, collar, and root rot of deciduous fruit and nut trees caused by *Phytophthora* spp. when used in conjunction with good cultural practices and rootstocks that are most tolerant to the disease. Make applications before symptoms appear, especially in areas favorable for disease development. **Vireo WDG** will not revitalize trees showing moderate to severe disease symptoms.

On new plantings, make the first applications at the time of planting (See NOTE below).

Apply 4 lbs. per treated acre (3 oz. per 1,000 sq. ft.) in sufficient water to obtain uniform coverage of the soil under the canopy of the trees. For banded applications, use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. Soil surface sprays of **Vireo WDG** will not be effective until the fungicide is moved into the root zone by rainfall or irrigation.

NOTE: (1) Do not apply to plantings that will bear harvestable fruit within 12 months of the last application, or possible illegal residues may result. (2) To avoid injury, do not use **Vireo WDG** to dip or spray tree roots. Do not concentrate it around the tree trunks. (3) Do not apply to trees under stress. (4) For intense plantings (2 to 3 times the normal planting rate), make applications on a per area basis, i.e. per acre or 1,000 sq. ft. Do not calculate the amount of **Vireo WDG** on a per tree basis. (5) In California, do not apply **Vireo WDG** to newly planted trees within 90 days of planting. (6) Do not apply more than 24 lbs. of **Vireo WDG** per treated acre per year.

GINSENG

Apply Vireo WDG to the soil before new growth. Applications of a metalaxyl or mefenoxam liquid product will control *Phytophthora* root rot in ginseng caused by *Phytophthora cactorum*.

Apply **Vireo WDG** at 1 ½ lbs. per acre as a drench in 100 to 400 gallons of water uniformly to the soil surface in the spring before the plants begin growing.

NOTE: Do not make any supplemental applications of **Vireo WDG**. Do not apply to plantings that will be harvested within 12 months of the last application as possible illegal residues may result.

GRASSES*

* Any grass, Graminae family (either, green or cured), except the following. Do not apply to sugarcane; to any of the following that will be fed or grazed by livestock: barley, buckwheat, corn, millet (pearl or proso), oats, popcorn, rice, rye, sorghum, teosinte, triticale, wheat, or wild rice; or to any enclosed pasture grasses or grasses grown for hay or silage such as bermudagrass, bluegrass, brome grass, or fescue.

Vireo WDG applied to the soil at planting will provide control of seedling diseases caused by *Pythium* spp.

For Stand Establishment

Apply up to 2 lbs. per acre as a broadcast surface spray at planting in a minimum of 20 gals. of water. Use ½ - 1 lb. per acre if grass seed was previously treated with a metalaxyl or mefenoxam seed treatment product. Use the higher rate of 1 to 2 lbs. per acre in areas where there has been a history of *Pythium* disease.

NOTE: To avoid possible illegal residues, (1) do not graze, feed green forage, or cut for hay for 60 days following application. (2) Do not apply to range grasses.

LEAFY VEGETABLES*

* Includes celery, garden grass, upland cress, endive, fennel, lettuce (head and leafy), parsley, rhubarb, spinach, and Swiss chard.

Apply Vireo WDG as a soil application to control damping off caused by *Pythium* spp. in leafy vegetables (*Albugo occidentalis*) and downy mildew in spinach. Applications may be made banded over the row, preplant incorporated, or injected with liquid fertilizer.

Preplant Incorporated Application: Apply 2 to 4 lbs. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre.

Surface Application: Apply 2 to 4 lbs. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate Vireo WDG before planting or move Vireo WDG into the seed zone after planting with ½ to 1 inch sprinkler irrigation.

NOTE: (1) To avoid possible illegal residues, do not harvest spinach within 21 days of a **Vireo WDG** application. (2) Do not use **Vireo WDG** for disease control in greenhouse or field-grown vegetable bedding plants. (3) Do not use **Vireo WDG** as a transplant water treatment.

LEGUME VEGETABLES (Succulent or Dried)

Includes field beans, French beans, kidney beans, lima beans, mung beans, navy beans, pinto beans, runner beans, snap beans, wax beans, broad beans (fava beans), chickpeas (garbanzo beans), lentils, lupines (sweet, white sweet, white and grain), garden peas, field peas, sugar peas, southern peas (blackeyed peas, crowder peas, cowpeas, catjang) and edible soybeans.

Pythium Damping-Off and Root Rot: Vireo WDG applied at planting will control damping-off and root rot caused by *Pythium* spp. Applications may be made preplant incorporated, or as a soil surface spray after planting.

Preplant Incorporated Application: Apply 1 to 2 lbs. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to

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calculate the amount of **Vireo WDG** needed per acre.

Surface Application: Apply 1 to 2 lbs. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate Vireo WDG before planting or move Vireo WDG into the seed zone after planting with ½ to 1 inch sprinkler irrigation.

NOTE: (1) Do not use **Vireo WDG** for disease control in greenhouse or field-grown vegetable bedding plants. (2) **Vireo WDG** may be tank mixed with pentachloronitrobenzene 2E or 75WP to control *Rhizoctonia* root and stem rot or white mold (*Sclerotinia sclerotiorum*) in snap and dry beans. Observe all precautions, limitations, rates, and directions for use on the respective pentachloronitrobenzene label before applying.

ONIONS - DRY BULB*, GREEN, AND ONION GROWN FOR SEED**

*Includes garlic, onions (dry bulb), and shallots (dry bulb).

** Includes green onions, leeks, spring onions or scallions, Japanese bunching onions, green shallots, or green eschalots.

Apply Vireo WDG at planting to control damping-off caused by *Pythium* spp. Applications may be made preplant incorporated or as a soil surface spray at planting.

Preplant Incorporated Application: Apply 1 to 2 lbs. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top two inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre.

Surface Application: Apply 1 to 2 lbs. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate Vireo WDG before planting or move Vireo WDG into the seed zone after planting with ½ to 1 inch sprinkler irrigation.

NOTE: Do not use **Vireo WDG** for disease control in greenhouse or field-grown vegetable bedding plants.

PAPAYA (Hawaii Only)

Vireo WDG aids in the control of Phytophthora root rot of papaya in new plantings in the field.

Papaya in the Field — New Plantings: Make the first application of **Vireo WDG** at the time of transplanting to the field or within one week of transplanting. Apply 3 ½ to 7 lbs. per acre* of soil treated (1 ¼ to 2 ½ oz. per 1,000 sq. ft.) as a soil surface spray in sufficient water to obtain thorough coverage of the soil under the canopy of the trees. After application, immediately irrigate with 1/8 to 1/4 inch of water. Repeat in 2 to 4 weeks if conditions are favorable for disease. Use the table below as a guide for treating individual trees.

NOTE: To avoid possible illegal residues do not apply within 12 months of harvest.

Diameter of Tree Canopy (Ft.)	Oz. of Vireo WDG per Ten Trees
3	$\frac{3}{16}$ to $\frac{3}{8}$
4	$\frac{3}{8}$ to $\frac{3}{4}$
6	$\frac{3}{4}$ to 1½
8	1¼ to 2½

PEANUTS

Vireo WDG is a soil-applied systemic fungicide for use in control of seedling and pod diseases of peanuts incited by *Pythium* spp.

Seedling Diseases: Apply ½ lb. per acre of crop as an application to the seed in-furrow or in a 7- inch band at the time of planting. For the in-furrow applications, position the spray so the fungicide is mixed with the soil covering the seed. Avoid spraying the seed directly with the spray solution or crop injury may occur.

NOTE: (1) Where pathogens other than *Pythium* spp. are present, use fungicides that control those diseases in combinations with **Vireo WDG**. (2) Where the predominant pod rot pathogens are *Pythium* spp. and *Rhizoctonia* spp., use **Vireo WDG** at 1 to 2 lbs. per acre tank mixed with 2 to 4 lbs. per acre of pentachloronitrobenzene 2E (see product labels).

PEPPERS AND EGGPLANT

Soil applications of **Vireo WDG** will control damping-off caused by *Pythium* spp. and crown rot caused by *Phytophthora capsici*. **Vireo WDG** may only be applied at planting or pre-planting to the soil.

Apply 2 to 4 lbs. per treated acre at the time of planting in sufficient water (20 to 50 gals.) or liquid fertilizer to provide uniform coverage. For direct seeded peppers, apply preplant or prior to emergence. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate Vireo WDG before planting or move Vireo WDG into the seed zone after planting with ½ to 1 inch sprinkler irrigation. For banded applications, a 12 to 16 inch band is recommended. **Vireo WDG** may be applied with liquid fertilizer shanked in as a band treatment to either side of the plant. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre.

Use Precautions: (1) **Vireo WDG** may cause some yellowing of the pepper leaves. (2) Plants already infected with *Phytophthora* cannot be cured with **Vireo WDG** applications. (3) The foliar blight phase of *Phytophthora* cannot be controlled with foliar applications of **Vireo WDG** (4) In areas where there is a history of late *Phytophthora* infections, an application of another EPA-registered fungicide labeled for *Phytophthora* control is recommended 17 to 21 days following the last **Vireo WDG** application.

PINEAPPLE

Apply **Vireo WDG** as a “seed piece” dip to provide effective control of heart rot disease of pineapple caused by *Phytophthora* spp.

Apply **Vireo WDG** as a crown dip before planting at the rate of 1 to 2 lbs. per 100 gals. of water. Use 75 to 100 gals. of dip solution per planted acre, depending on crown size, plant density and dipping techniques.

NOTE: If there is a crop failure within one year of planting treated crowns, do not harvest plant material for animal feed.

ROOT AND TUBER VEGETABLES*

Includes artichoke (Jerusalem), beet (sugar** and table), carrot, cassava, chicory, dasheen (taro), ginger, ginseng***, horseradish, parsnip, potato, radish, rutabaga, salsify, sweet potato, tanager, turnip, and yams.

* See Note at end of section.

** See separate section for Sugar Beets

*** See separate section for Ginseng

Apply Vireo WDG at planting to control damping-off caused by *Pythium* and *Phytophthora* spp. Applications may be made preplant incorporated or as a soil surface spray at planting.

Preplant Incorporated Application: Apply 2 to 4 lbs. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top two inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per dose.

Surface Application: Apply 2 to 4 lbs. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate Vireo WDG before planting or move Vireo WDG into the seed zone after planting with ½ to 1 inch sprinkler irrigation.

Potatoes

Vireo WDG will provide effective control of Pythium leak caused by *Pythium* spp., pink rot caused by *Phytophthora erythroseptica*, and Pythium seedling caused by *Pythium* spp.

Apply 0.84 oz. of product per 1,000 linear ft. of row on a 6 to 8-inch band at planting in a minimum or 3 gals. of water per acre. Make application directly over the seed piece(s) prior to row closure or use markout method (incorporated).

Vireo WDG may be impregnated on dry fertilizer provided the application rate of 0.84 oz. per 1000 linear ft. of row is observed and placement is in a 6 to 8-inch band incorporated within the planted hill. **Vireo WDG** may also be applied in combination with liquid fertilizers.

NOTE: (1) Do not use **Vireo WDG** for disease control in greenhouse or field-grown vegetable bedding plants. (2) To avoid development of insensitivity in the pathogen population, do not apply **Vireo WDG** to potatoes beyond the at-planting growth stage.

SOYBEANS

Vireo WDG is a soil-applied systemic fungicide for use in the control of *Phytophthora* root and stem rot and *Pythium* damping-off. **Vireo WDG** may be applied broadcast, banded or in the seed furrow before the seeds are covered. The seed furrow applications will provide more consistent results if rain is not expected before the seeds germinate.

For best results against *Phytophthora* root and stem rot, use **Vireo WDG** with soybean varieties that have some tolerance to the races of *Phytophthora* present in the field. Use the higher rate of **Vireo WDG** in areas with a history of heavy *Phytophthora* damage.

Under heavy late season *Phytophthora* pressure, **Vireo WDG** may not provide complete control.

Surface Application: For full season control, apply 2.5 lbs. per treated acre in sufficient water or liquid fertilizer to provide uniform coverage at the time of planting. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. For early to mid season control, apply $\frac{3}{4}$ to $1\frac{1}{2}$ lbs. per treated acre.

In-Furrow Applications: For full season control, apply $\frac{1}{2}$ oz. per 1,000 linear feet of row as an in-furrow spray in 5 to 10 gals. of water or liquid fertilizer at planting. Position the spray so the fungicide is mixed with the soil covering the seed. Avoid spraying the seed directly with the spray solution or crop injury may occur. Use sufficient water or liquid fertilizer to provide uniform coverage. Use the following table to determine the amount of **Vireo WDG** needed per acre based on row spacing. For early to mid season control, apply $\frac{2}{10}$ to $\frac{3}{10}$ oz. per 1,000 linear feet of row.

Application Rates Per Acre According to Row Spacing

Row Spacing	Linear Ft. of Soybean Row per Acre	Ounces of Vireo WDG Needed Per Acre Rate Desired		
		$\frac{2}{10}$ oz.	$\frac{3}{10}$ oz.	$\frac{1}{2}$ oz.
38 in.	13,756	2	4	$7\frac{1}{2}$
36 in.	14,520	$2\frac{1}{4}$	$4\frac{1}{2}$	8
30 in.	17,424	$2\frac{3}{4}$	$5\frac{1}{2}$	$9\frac{1}{2}$
24 in.	21,780	$3\frac{1}{4}$	$6\frac{1}{2}$	12
20 in.	26,136	4	8	14

NOTE: **Vireo WDG** is specific for *Pythium* and *Phytophthora* and will not control other diseases that may attack soybeans.

STONE FRUITS*, WALNUTS, AND ALMONDS

Do not apply within 12 months of harvesting citrus fruit for food or feed.

* Includes apricots, cherries (sweet, tart), nectarines, peaches, plums (Chickasaw, Damson, Japanese), and prunes.

Use of **Vireo WDG** will aid in the control of crown, collar and root rot cause by *Phytophthora* spp. when used in conjunction with good cultural practices and rootstocks that are most tolerant to the disease.

On new plantings, make the application of **Vireo WDG** 2 weeks after planting.

Apply 8 lbs. per treated acre (3 oz. per 1,000 sq. ft.) in sufficient carrier to obtain thorough coverage of the soil under the canopy of the trees. Sufficient surface area should be treated in nurseries to cover the root zone on the plants. For banded applications, use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. Soil surface sprays of **Vireo WDG** will not be effective until the fungicide is moved into the root zone by rainfall or irrigation,

Use Precautions: (1) Do not dip the roots of trees in **Vireo WDG** solutions, spray the roots or concentrate it around the tree trunks or injury may occur. (2) Do not apply it to trees under stress. (3) For intense plantings (2 to 3 times the normal planting rate) make applications on a per area basis, i.e. per acre or 1,000 sq. ft. Do not calculate the amount of **Vireo WDG** on a per tree basis. (4) In California, do not apply **Vireo WDG** to newly planted trees within 90 days of planting.

NOTE: To avoid possible illegal residues, (1) Do not graze livestock in treated areas, and (2) Do not graze or feed cover crops in treated orchards. (3) Do not apply within 12 months of harvesting citrus fruit for food or feed.

SUGAR BEETS

Vireo WDG will provide control of diseases caused by *Pythium* spp. Make applications by preplant incorporation or as a surface spray at planting.

Preplant Incorporated Application: Apply 2 to 4 lbs. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer and incorporate in the top 2 inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre.

Surface Application: Apply 2 to 4 lbs. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate **Vireo WDG** before planting or move **Vireo WDG** into the seed zone after planting with ½ to 1 inch sprinkler irrigation.

TOBACCO

Vireo WDG is a soil-applied systemic fungicide for use in the field before transplanting for control of black shank (*Phytophthora parasitica*, var *Nicotianae*) and blue mold (*Peronospora tabacina*) on all types of tobacco. For control of anthracnose and other tobacco diseases, use approved fungicides to control those diseases.

NOTE: (1) Do not use **Vireo WDG** for disease control in greenhouse crops or tobacco plant beds. (2) Do not dip plants in solutions containing **Vireo WDG**, or crop injury

may occur. (3) Do not use **Vireo WDG** for disease control in floathouse, floatbed production facilities, hydroponic production or greenhouse facility. (4) Do not use **Vireo WDG** as a transplant water treatment. (5) Do not use **Vireo WDG** as a foliar spray to field planted tobacco.

Field Planted Tobacco

Blue Mold: Apply **Vireo WDG** as a broadcast soil application prior to transplanting and incorporated in the top 2 to 4 inches of soil.

Black Shank: Use **Vireo WDG** as a broadcast soil application prior to transplanting and incorporate in the top 2 to 4 inches of soil. Apply **Vireo WDG** using conventional ground application equipment in sufficient water or fertilizer to provide uniform coverage. Use the following table to determine the amount of **Vireo WDG** needed per acre depending on the black shank severity.

Type of Tobacco	Disease Level in Field	Rate of Vireo WDG per Acre
Flue-Cured	Low to moderate (less than 6% disease)	2 lbs.
	High (more than 6% disease)	4 lbs.*
Burley and Other**	Low to moderate (less than 6% disease)	4 lbs.
	High (more than 6% disease)	6 lbs.

* Florida and Georgia — Use 6 lbs. per treated acre of **Vireo WDG** in fields with heavy black shank levels (greater than 6%).

** Pennsylvania — Do not use **Vireo WDG** for black shank control.

Resistance Management: (1) For best results against black shank, use **Vireo WDG** with tobacco varieties that have high resistance to black shank and use crop rotation. In fields where there is a history of severe black shank incidence, use the highest rate and plant variety that is resistant to the race of *Phytophthora* present in the field. (Burley L8 hybrids are only resistant to *Phytophthora* Race O.) (2) **Vireo WDG** is not recommended for use in high black shank areas on highly susceptible flue-cured varieties. (3) Failure to adequately control nematodes in fields treated with **Vireo WDG** may result in poor control of black shank.

No-Till Tobacco: For black shank and blue mold on all types of tobacco, apply **Vireo WDG** to the field before transplanting and incorporate in the top 2 to 4 inches of soil. Apply 1 to 2 lbs. per treated acre as a preplant, broadcast or banded soil application. For banded applications, use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre. Do not make the lay-by application if more than 2 lbs. per acre of **Vireo WDG** were applied at transplanting or if no **Vireo WDG** was applied at transplanting.

TOMATOES

Soil applications of **Vireo WDG** at planting will provide control of damping-off caused by *Pythium* spp.

Damping-Off (*Pythium* spp.): Apply 2 to 4 lbs. per treated acre in sufficient water or liquid fertilizer to provide uniform coverage at the time of planting. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate Vireo WDG before planting or move Vireo WDG into the seed zone after planting with ½ to 1 inch sprinkler irrigation. For banded applications, a 7-inch band is recommended. Use the formula in the **Product Information** section of this label to calculate the amount of **Vireo WDG** needed per acre.

If soil surface sprays are used, the **Vireo WDG** must be incorporated into the soil with ½ to 1 inch of rainfall or sprinkler irrigation.

Vireo WDG may be applied with water or liquid fertilizer. Use the test in the **Product Information** section to check for compatibility with various fertilizers.

NOTE: (1) To avoid possible illegal residues, do not apply more than 6 lbs. per treated acre per season. (2) Keep **Vireo WDG** suspended in the fertilizer solution with bypass or mechanical agitation. Refer to the **Product Information** section for drip irrigation instructions. (3) Do not use **Vireo WDG** for disease control in greenhouse or field-grown vegetable bedding plants.

(4) Do not use **Vireo WDG** as a transplant water treatment.

REPLANTING

If replanting is necessary, additional application of **Vireo WDG** may be made provided that the total amount of active ingredient in **Vireo WDG** applied does not exceed the maximum allowed for the specific crop.

ROTATION (PLANTBACK) RESTRICTION

Do not plant any crop which is not registered for use with the **Vireo WDG** active ingredient in soil treated with this active ingredient for a period of 12 months, unless a shorter interval is specified on the following list.

Rotation Crop	Planting Time From Last Vireo WDG Application
Alfalfa (including birdsfoot trefoil), Almonds, Apples, Asparagus, Avocados Blueberries Citrus, Clover, Cole Crops, Cotton, Cranberries, Cucurbit Vegetables Deciduous Fruits and Nuts* Eggplant Garlic, Ginseng, Grapes, Grasses** Hops Leafy Vegetables (Excluding Brassica), Legume Vegetables (beans and peas — succulent and dried) Onions (dry bulb, green, and seed) Papaya, Peanuts, Peppers, Pineapples, Potatoes Raspberries, Root and Tuber Vegetables Soybeans, Spinach, Stone Fruits, Strawberries, Sugar Beets Tobacco, Tomatoes Walnuts	0 days
Cereal Grains (other than Corn)	14 days
Corn	9 months
Crops Not Intended for Food or Feed	0 days
All Other Crops Intended for Food or Feed	12 months

* These crops and other perennial crops may be planted immediately following last application of **Vireo WDG**, provided they will not bear harvestable fruit within 12 months.

** Any grass, Gramineae family (either green or cured), except the following. Do not apply to sugarcane; to any of the following that will be fed to or grazed by livestock: barley, buckwheat, corn, millet (Pearl or proso), oats, popcorn, rice, rye, sorghum, teosinte, triticale, wheat, or wild rice; or to any enclosed pasture grasses or grasses grown for hay or silage such as bermudagrass, bluegrass, brome grass, or fescue.]

CONIFERS, NON-BEARING CITRUS, NON-BEARING DECIDUOUS FRUITS AND NUTS, ORNAMENTALS AND TURF

Vireo WDG is a systemic fungicide for use on ornamentals, turf, nonbearing citrus grown in nurseries and as landscape plantings, conifers grown in nurseries and plantations, including Christmas trees and nonbearing deciduous fruit and nut trees grown in nurseries.

Resistance Management: Vireo WDG is a systemic fungicide having a specific mode of action and could be subject to development of resistant strains of fungi. Development of resistance cannot be predicted. Therefore Phoenix Environmental Care, LLC cannot assume liability for crop damage resulting from resistant strains of fungi. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance and ways to control any possible Vireo WDG resistant strains of fungi which may occur.

To help decrease the chance of downy mildew resistance, do not use Vireo WDG for the control of downy mildew diseases, except for use in turf. Use Vireo WDG only as a soil application for control of soil-borne diseases with the exception of azalea petal blight.

To avoid drift, do not apply under windy conditions. Avoid spray overlap, or crop injury may result.

ORNAMENTALS

Use Vireo WDG on Container, bench, or bed grown ornamentals in greenhouses or outdoor nurseries, and for use on ornamentals grown for indoor and outdoor landscaping, for control of damping-off, and root and stem rot diseases caused by Pythium and Phytophthora. Vireo WDG may be applied through irrigation systems, as a soil drench or as a soil surface spray, or incorporated into a soil mix for subsequent seeding or transplanting of ornamentals. Within a rate range given for a specific group of ornamentals, use the lower rate for the shortest interval listed and the higher rate for the longest interval.

For drench applications, use enough of the specified Vireo WDG water solution to wet the root zone of plants. In general, ½ lb. per sq. ft. of this solution is sufficient for ornamentals growing in containers with 4 inches of growth media. Containers with growth media depth greater than 4 inches generally require ¾ - 1 lb. per sq. ft. of the solution. If soil surface applications are made, irrigate with at least ½ inch of water if rainfall does not occur within 7 days.

NOTICE TO USER: Due to the large number of species and varieties of ornamentals and nursery plants, it is impossible to test every one for tolerance to Vireo WDG. Neither the manufacturer nor the seller has determined whether or not Vireo WDG can be used safely on ornamental and nursery plants not specified on this label. The professional user should determine if Vireo WDG can be used safely prior to commercial use. In a small area, test the recommended rates for a particular group of unlabeled plants, i.e., bedding plants, foliage, etc., for phytotoxicity prior to widespread use.

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Foliage Plants Aglaonema, Aphelandra, Dieffenbachia, Peperomia, Philodendron*, Pothos, Schefflera, Sedum, Sempervivum, Zygocactus	<p>Drench: Mix 0.25 to 0.625 oz. with 100 gals. of water. Apply 8 oz. solution per sq. ft. For growth media depth greater than 4 inches, apply 12 – 16 oz. solution per sq. ft.</p> <p>*NOTE: On Philodendron, use 0.5 to 1 oz./100 gals.</p> <p>Soil Mix: Thoroughly mix 0.125 – 0.25 oz. with each cu. yd. of soil mixture.</p> <p>Soil Surface Spray to Foliage Plants in the Landscape: Apply 1 oz./1,000 sq. ft. to the soil surface in a broadcast, or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of 1/2 inch of water if rainfall does not occur within seven days.</p>
Bedding Plants Ageratum, Algerian ivy, Artemisia, Aster, Begonia, Caladium, Carnation, Chrysanthemum, Coleus, Daisy, English ivy*, Foxglove, Gaillardia, Geranium, Impatiens, Marigold, Pansy, Petunia, Phlox, Pinks, Primrose, Prostrate, Rosemary, Salvia, Snapdragon, Verbena, Vinca, Zinnia	<p>Drench at Seeding: (Soil 2-3 inches deep) Mix 0.125 – 0.25 oz. with 100 gals. of water and apply 0.5 oz. solution per sq. ft.</p> <p>Drench at Transplanting: (Soil 2-3 inches deep) Mix 0.25 - 1 oz. with 100 gals. of water and apply 8 oz. solution per sq. ft. For growth media depth greater than 4 inches, apply 12 -16 oz. solution per sq. ft.</p> <p>Soil Mix at Seeding and at Transplanting: Thoroughly mix 0.125 oz. with each cu. yd. of soil mixture.</p> <p>*NOTE: Do not apply to English ivy more than once every 6 months or injury may occur.</p>

<p>Flowers African violet, Anthurium, Baby's breath, Carnation, Chrysanthemum, Columbine, Delphinium, Easter lily*, Geranium, Gloxinia, Poinsettia, Rose</p>	<p>Drench: Mix 0.25 - 1.25 oz. with 100 gals. of water and apply 8 oz. solution per sq. ft. For growth media depth greater than 4 inches, apply 12 – 16 oz. solution per sq. ft.</p> <p>*NOTE: Do not apply more than ½ oz./100 gals of water to Easter lily and only make one at-planting application.</p>
<p>Rhododendrons and Azaleas</p>	<p>Drench: Phytophthora root and crown rot – Mix 0.5 – 1.25 oz. with 100 gals. of water and apply 8 oz. solution per sq. ft. For growth media depth greater than 4 inches, apply 12-16 oz. solution per sq. ft.</p> <p>Soil Surface Spray: Apply 1 -2 oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of 1/2 inch of water if rainfall does not occur within seven days.</p>
<p>Woody Ornamentals other than Azaleas <i>Aucuba japonica</i>, Arborvitae, V Boxwood, Ceanothus, Cotoneaster, Dogwood, Ficus, "Halls" Honeysuckle, Ilex, <i>Juniperus</i> spp., Photinia, <i>Pieris japonica</i>, <i>Pinus</i> spp., Pittosporum, White cedar, White pine, Yew</p>	<p>Drench: Mix 0.5 - 2 oz. with 100 gals. of water and apply 8 oz. solution/sq. ft. For growth media depth greater than 4 inches, apply 12 – 16 oz. solution/sq. ft.</p> <p>Soil Surface Spray: Apply 1 – 2.5 oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of 1/2 inch of water if rainfall does not occur within seven days.</p> <p>NOTE: Do not apply to Euonymus or injury may occur.</p>

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CITRUS IN NURSERIES AND LANDSCAPE PLANTINGS (NONBEARING)

Use **Vireo WDG** on nonbearing citrus for control of citrus foot rot, root rot, and trunk canker caused by *Phytophthora* spp. Apply to the soil as a drench or as a spray in a banded application.

Make the first application of **Vireo WDG** at the time of planting.

Soil Drench: Mix 2-3 oz./100 gals. of water and apply as a drench over the row at the rate of 100-250 gals./1,000 feet of row. The width of the drench treatment should be wide enough to cover the root systems of the plants.

Soil Surface Spray: Apply 8 lbs. per acre of treated soil in a broadcast or banded surface spray to seedbeds, liners, or bedded stock in sufficient water to obtain uniform coverage. If applications are banded, the treated area should be wide enough to cover the root systems of the plants. Follow with a 1/2-inch irrigation.

Calculate the amount of **Vireo WDG** needed for a banded treatment by using the formula at the end of the **Product Information** section of this label.

NOTE: Do not use Vireo WDG in greenhouse citrus nursery stock intended for commercial fruit production.

CONIFERS IN NURSERIES AND PLANTATIONS (INCLUDING CHRISTMAS TREES)

Vireo WDG provides control of *Phytophthora* root rot of conifers. For best results, apply ½ to 1 inch of water after application if rain is not expected within three days.

Conifers in Nurseries

Seedbeds and Plug-Plantings	Apply 1 ¼ lbs. of Vireo WDG in at least 50 gals. of water per acre in the spring and again in the fall.
2-0 Transplants	Apply 2 ½ lbs. Vireo WDG in at least 50 gals. of water per acre in the spring and again in the fall.

Conifers in Plantations

Use of **Vireo WDG** will aid in the control of *Phytophthora* root rot when used in conjunction with good cultural practices. The use of **Vireo WDG** will not overcome poor management practices such as planting on sites that are prone to flooding or are poorly drained. **Vireo WDG** fungicide will not revitalize trees showing moderate to severe disease symptoms.

Apply 5.5 – 11 lbs. of **Vireo WDG** in a minimum of 50 gals. of water as a directed soil spray. Do not apply as a foliar spray. Applications should be made in early spring before

growth starts and in the fall before the ground freezes. Calculate the amount of **Vireo WDG** needed for a banded treatment by using the formula at the end of the Product Information section of the label.

NOTE: 1) Do not apply to trees that will bear harvestable fruit within 12 months of the last application, or possible illegal residues may result. 2) Do not apply more than 8.8 oz. per 1,000 sq. feet (24 lbs. per acre) of Vireo WDG per year.

DECIDUOUS FRUITS AND NUTS IN NURSERIES (NONBEARING)

Vireo WDG provides control of Pythium root rot and Phytophthora root, crown, and collar rot of nonbearing deciduous fruits and nuts.

Apply 3 oz. per 1,000 sq. ft. in sufficient water to obtain thorough coverage of the soil under the canopy of the trees. Treat sufficient surface area in nurseries to cover the root zone of the plants.

NOTE: 1) Do not apply to trees that will bear harvestable fruit within 12 months of the last application, or possible illegal residues may result. 2) Do not apply more than 8.8 oz. per 1,000 sq. ft. (24 lbs. per acre) of **Vireo WDG** per year.

TURF (Golf Courses, Lawns, Landscape Areas, Around Residential, Institutional, Public, Commercial and Industrial Buildings, Parks, Recreational Areas, and Athletic Fields, Sod Farms)

Vireo WDG controls Pythium blight and Pythium damping-off in turf, yellow tuft (downy mildew) in bluegrass, and downy mildew in St. Augustinegrass. **Within the rate range given for turf, use the lower rate for the shortest interval listed and the higher rate for the longest interval.**

Newly Seeded Areas Pythium Damping-Off Pythium Blight Yellow Tuft Downy Mildew	Apply 0.5 - 1 oz. in 5-10 gals. of water per 1,000 sq. ft. immediately after seeding. Retreat at 7-14 day intervals if conditions remain favorable for disease. Note: For long-term control of Pythium in areas when using seed treated with the active ingredient contained in Vireo WDG , make application of Vireo WDG 7-10 days after seeding.
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NOTE: For control of other diseases of turf, use propiconazole alone or in tank mix combination with **Vireo WDG**. Refer to the propiconazole label for rates, precautions, restrictions, etc.

Resistance Management: To minimize the potential for resistance, 1) Make no more than three applications of **Vireo WDG** per season and 2) Apply an alternate EPA-registered fungicide for Pythium control at least once during the season.

ROTATIONAL CROPS

Do not plant any crop which is not registered for use with metalaxyl in metalaxyl-treated soil for a period of 12 months.

SEED TREATMENT

Vireo WDG is a systemic fungicide for use as a seed dressing.

Resistance Management: **Vireo WDG** is a systemic fungicide having a specific mode of action. **Vireo WDG** could be subject to development of resistant strains of fungi. Development of resistance cannot be predicted. Therefore, to the extent consistent with applicable law, Phoenix Environmental Care, LLC cannot assume liability for crop damage resulting from resistant strains of fungi. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance and ways to control any possible **Vireo WDG** resistant strains of fungi which may occur.

Vireo WDG may be applied as a water-based slurry with other registered seed treatment insecticides and fungicides through standard slurry or mist-type commercial seed treatment equipment.

Grain Sorghum	For Pythium damping-off control: Apply Vireo WDG as a seed treatment at the rate of ½ -1 oz. per 100 lbs. of seed.
Soybeans	For Pythium damping-off and early season Phytophthora control: Apply Vireo WDG as a seed treatment at the rate of ½ - 1. oz per 100 lbs. of seed.
Sunflower.	For control of systemic downy mildew: Apply Vireo WDG as a seed treatment as the rate of 2 oz. per 100 lbs. of seed.

NOTE: Federal law requires that bags containing treated seeds shall be labeled with the following information: "This seed has been treated with metalaxyl fungicide. Do not use for feed, food or oil purposes. Store away from feeds and foodstuffs. Use with an EPA-approved dye that imparts an unnatural color to the seed.

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STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage: Always store pesticides in original container. For minor spills, leaks, etc. follow all precautions indicated on this label and clean-up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

Pesticide Disposal: Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide spray mixture, or rinsate is a violation, of Federal law. Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to Federal, State or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office.

Container Disposal: Nonrefillable containers equal to or less than 5 gallons in capacity: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 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. [Nonrefillable containers greater than 5 gallons or 50 lbs in capacity: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Conditions of Sale and Limitation of Warranty and Liability

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying and 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 Phoenix Environmental Care, LLC 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 Phoenix Environmental Care, LLC and Seller harmless for any claims relating to such

factors.

Phoenix Environmental Care, LLC 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 this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Phoenix Environmental Care, LLC and Buyer and User assume the risk of any such use. To the extent permitted by law, Phoenix Environmental Care, LLC 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 with applicable law, Phoenix Environmental Care LLC or Sell shall not be liable for any incidental, consequential, or special damages resulting from the use or handling of this product. TO THE EXTENT PERMITTED BY LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF PHOENIX ENVIRONMENTAL CARE, LLC 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 PHOENIX ENVIRONMENTAL CARE, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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