

55146-1

10-22-2010

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

OCT 22 2010

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Ms. Christina M. Swick  
Lewis & Harrison, LLC, Agent  
For Nufarm Americas, Inc.  
122 C. Street NW # 740  
Washington, D.C. 20001

Subject: Notification for Label Revisions under PRN 98-10 and 2007-4  
Storage & Disposal and General Label Changes

Dear Registrant:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notices (PRN) 98-10 and 2007-4 Storage & Disposal and Other Changes dated January 28, 2010 for:

**EPA Registration 55146-1 "CHAMP® WG"**

The Registration Division (RD) has conducted a review of the request(s) for applicability under PRN 98-10 and 2007-4 and finds that the label changes requested fall within the scope of PRN 98-10, and 2007-4. The label has been date-stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-5335 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

A handwritten signature in black ink that reads "Rachel C. Halloran".

Paul J. Mastradone, Ph.D., Acting  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs

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United States  
Environmental Protection Agency  
Washington, DC 20460

- Registration
- Amendment
- Other: Notification

OPP Identifier Number

**Application for Pesticide - Section I**

1. Company/Product Number <b>55146-1</b>	2. EPA Product Manager <b>Tony Kish</b>	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) <b>CHAMP® WG</b>	PM# <b>22</b>	
5. Name and Address of Applicant (Include ZIP Code) <b>Nufarm Americas, Inc. AGT Division 150 Harvester Drive, Ste. 200 Burr Ridge, IL 60527 PLEASE SEND ALL CORRESPONDENCE TO "CONTACT POINT" LISTED BELOW</b>	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to: <b>NOTIFICATION</b> EPA Reg. No. _____ Product Name <b>OCT 22 2010</b>	

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)

**Notification of Minor Label Changes in Accordance With PR Notices 2007-4 and 1998-10**

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 95-2 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be the subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Signature: Christina M. Swick

Date: 9/24/10

**THIS SUBMISSION IS NOT SUBJECT TO PRIA FEES**

**Section - III**

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
*Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1, 2.5, 30, 220, 250 gals		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6. Manner in Which Label is Affixed to Product		<input type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____	

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)		
Name <b>Christina M. Swick, Lewis &amp; Harrison 122 C St. NW Suite 740, Washington DC 20001</b>	Title <b>Agent for Nufarm Americas, Inc.</b>	Telephone No. (Include Area Code) <b>(202) 393-3903 x16</b>
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature <u>Christina M. Swick</u>	3. Title <b>Agent for Nufarm Americas, Inc.</b>	
4. Typed Name <b>Christina M. Swick</b>	5. Date <b>September 24, 2010</b>	





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DA 44-504

**LEWIS &  
HARRISON**

122 C Street, N.W., Suite 740  
Washington, D.C. 20001  
telephone 202.393.3903  
fax 202.393.3906

Consultants in Government Affairs

September 24, 2010

HAND DELIVERED

Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
US Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202-4501

**ATTENTION: Tony Kish  
Product Manager #22**

**SUBJECT: Nufarm Americas, Inc.  
CHAMP<sup>®</sup> WG, EPA Reg. No. 55146-1  
Notification of Minor Label Changes per PR Notices 98-10 and 2007-4**

Dear Mr. Kish:

On behalf of Nufarm Americas, Inc, we are notifying the Agency of minor changes to the CHAMP<sup>®</sup> WG product label. The proposed label contains minor changes in accordance with PR Notice 98-10 as well as the exact wording set forth in PR Notice 2007-4.

In support of this submission I have enclosed the following documents:

- 1) Application for Pesticide Notification;
- 2) One (1) copy of the proposed label with changes highlighted;
- 3) Two (2) copies of the proposed label;
- 4) CD containing a PDF copy of the proposed label;
- 5) Certification with Respect to Label Integrity form and,
- 6) Letter of authorization to allow Lewis & Harrison to act as company agent.

If you have any questions or require any additional information, please feel free to contact me at 202-393-3903 ext. 16 or [cswick@lewisharrison.com](mailto:cswick@lewisharrison.com).

Sincerely,

Christina M. Swick

Christina M. Swick  
Agent for,  
Nufarm Americas, Inc.

cc: Nathan Ehresman (Nufarm Americas, Inc.)

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# CHAMP<sup>®</sup> WG

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AGRICULTURAL FUNGICIDE

NOTIFICATION

[Alternate Brand Name: CHAMPION<sup>®</sup> Wettable Powder]

OCT 22 2010

**ACTIVE INGREDIENT:**

Copper Hydroxide\* (CAS No. 20427-59-2) ..... 77.0%

**OTHER INGREDIENTS:** ..... 23.0%

**TOTAL:** ..... 100.0%

\*Metallic Copper Equivalent 50.0%

**KEEP OUT OF REACH OF CHILDREN**

**DANGER / PELIGRO**

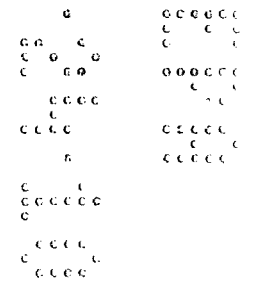
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

**SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS**

**For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300  
For Medical Emergencies Only, Call (877) 325-1840**

EPA REG. NO. 55146-1  
EPA EST. NO. \_\_\_\_\_

**Manufactured For  
NUFARM AMERICAS INC.  
AGT DIVISION  
150 Harvester Drive  
Burr Ridge, IL 60527**



**NET CONTENTS:** \_\_\_\_\_ Lbs. ( \_\_\_\_\_ Kg)

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
DANGER / PELIGRO**

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Harmful if inhaled. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing dust.

**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.

**Mixers, loaders, applicators, and other handlers must wear the following:**

- long-sleeved shirt and long pants,
- chemical-resistant gloves made of any waterproof material,
- shoes plus socks, and
- protective eyewear (face shield, goggles, or shielded safety glasses).

See engineering controls for additional requirements.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Control Statement:**

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

**USER SAFETY RECOMMENDATIONS**

**Users Should:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**FIRST AID**

<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</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 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

**NOTE TO PHYSICIAN**

Probable mucosal damage may contraindicate use of gastric lavage.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product 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 product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

## 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. Do not apply when wind speed favors drift beyond the area intended for treatment. For any requirements specific to your State or Tribe, consult the State or Tribal 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 internal (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the REI of 48 hours.

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 and protective eyewear.

For at least seven (7) days following the application of copper-containing products in greenhouses: at least one (1) container or station designed specifically for flushing eyes is available in operating condition with the WPS-required decontamination supplies for workers entering the area treated with copper-containing products, workers are informed orally, in a manner they can understand:

- that residues in the treated area may be highly irritating to their eyes
- that they should take precautions, such as refraining from rubbing their eyes, to keep the residues out of their eyes,
- that if they do get residues in their eyes, they should immediately flush their eyes with the eye flush container or eye flush station that is located with the decontamination supplies, and
- how to operation the eye flush container or eye flush station.

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the WPS 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 to enter treated area until sprays have dried.

## SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

**Droplet Size\*\*** Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

**Wind Speed DO NOT** apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are no sensitive areas within 250 feet downwind.

**Temperature Inversions** If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. **DO NOT** make applications into areas of temperature inversions or stable atmospheric conditions.



**Other State and Local Requirements** Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed.

**Equipment** All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

*Additional requirements for aerial applications:*

- The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- Release spray at the lowest height consistent with efficacy and flight safety. **DO NOT** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
- When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

*Additional requirements for ground boom application:*

**DO NOT** apply with a nozzle height greater than 4 feet above the crop canopy.

### PRODUCT INSTRUCTIONS

This product can be used as noted below. This product is adaptable to spraying from aircraft and ground spraying equipment. Depending upon the equipment used and the specific crop, the volume applied per acre will differ. Refer to volume table below:

**Minimum Spray Volume (Gallons) Per Acre When Applying This Product:**

	BY AIR		BY GROUND	
			Dilute	Concentrate
<b>Vegetables</b>	3		20	--
<b>Field Crops</b>	3		20	--
<b>Small Fruits</b>	5		150	50
<b>Vines</b>	5		150	50
<b>Tree Crops</b>	10		400	50
<b>Citrus</b>	10		800	100 (20 – Florida)
<b>Miscellaneous</b>	10		150	50

**Turf (Algae Control):** Apply 0.14 pound of this product per 1,000 square feet (6 lbs. product per acre (0.07 lb. metallic copper per 1,000 sq. ft., equivalent to 3 lbs. metallic copper/A)) in 5 gallons of water. The minimum retreatment interval is 7 days. Do not exceed the maximum annual application rate of 21 lbs. metallic copper per Acre per year.

**Greenhouse and Shadehouse:** Apply this product according to specific rates given for those crops in pounds per acre or pounds per 100 gallons. Two level tablespoons of this product per 1,000 square feet is equivalent to 1 pound per acre. One level tablespoon of this product per gallon of water is equivalent to 1 pound per 100 gallons.

**Ornamentals:** Apply as a thorough coverage spray using 0.5 pound of this product per 100 gallons of water. Apply no more than 800 gallons solution per acre dilute per application depending on the size of the ornamental. Do not make more than 10 applications at these rates per year. The minimum retreatment interval is 7 days. Do not exceed the maximum annual application rate of 20 lbs. metallic copper per Acre per year.

**Note:** Compact flowers may take as little as 20 gallons solution per acre while large trees may take as much as 800 gallons solution per acre.

This product may be applied as an aerial or ground concentrate spray unless specifically directed otherwise by crop in the site instructions.

Under heavy disease pressure or when conditions favor such, use the higher rate and shorter spray intervals specified for each crop. In addition, use the higher rates for large mature tree crops.

The per acre use rate of this product is applicable for both dilute and concentrate spraying. Consult this label for specific rates and timing of application by crop.

Complete spray coverage is essential to assure optimum performance from this product. When treating on a concentrate basis or by aerial application, unless you have had specific previous experience, it is advisable to test for compatibility and crop tolerance prior to full-scale commercial utilization.

While volume is important in obtaining full spray coverage, other factors such as foliage density, environmental conditions and sprayer calibrations, can have a greater impact. Always be sure that sprayers are calibrated to spray equipment

manufacturer's specifications and environmental conditions are within those specified by State and local regulatory authorities.

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When mixing, fill spray tank half full with water. Add this product slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Spreaders, stickers, insecticides, nutrients, etc. should be added last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Observe the most stringent precautions and limitations on the label of all products used in mixtures.

**NOTE:** This product should not be applied in a spray solution having a pH less than 6.0 as phytotoxicity may occur.

Environmental conditions such as extended periods of wet weather, acid rain, etc. which alter the pH of the leaf surface may effect the performance of this product resulting in possible phytotoxicity or loss of effectiveness.

The following specific instructions are based on general application procedures. The recommendations of the State Agricultural Extension Service should be closely followed as to timing, frequency, and number of sprays per season.

**NOTE:** Where application rates are provided in a range, for example 4 to 12 lbs., the higher rates are used when rainfall is heavy and disease pressure is high.

This product may be reactive on metal and masonry surfaces such as galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.

Agricultural chemicals may perform in an unpredictable manner when tank mixed, especially where several products are involved. Reduced effectiveness or crop injury may occur. Unless specified on this label or by a state/local expert, test for compatibility and tolerance to crop injury prior to full-scale commercial utilization of a new tank mix or tank mixing should not be undertaken.

Application equipment should be thoroughly flushed with clean water after each day's use.

### **CHEMIGATION INSTRUCTIONS**

Apply this product only through center pivot, motorized lateral move, end tow, traveler, big gun, plastic solid set, or plastic hand move sprinkler irrigation systems that do not contain aluminum components. Do not apply this product through any other type of irrigation system unless specifically set forth above or as may be specified in the future as additional systems not containing aluminum components come into use.

Shut off injection equipment after treatment and continue to operate irrigation system until this product has been cleared from the last sprinkler head.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform 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 pesticide label-prescribed safety devices for public water are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2.5 inches tall, and all letters and the symbol shall be a color, which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

This sign is in addition to any sign posted to comply with the WPS.

## CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

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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.

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, the water from the public water system should be discharged into the 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.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must 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.

When mixing, fill nurse tank half full with water. Add this product slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Because of the wide variety of possible combinations that can be encountered, observe the most stringent cautions and limitations on the label of all products used in mixtures.

This product should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Agitation is recommended.

### SPRINKLER CHEMIGATION

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.

Do not apply when wind speed favors drift beyond the area intended for treatment.

The system must contain a functional check valve, vacuum relief value, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump's motor stops.

The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, 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.

Do not apply when wind speed favors drift beyond the area intended for treatment.

When mixing, fill nurse tank half full with water. Add this product slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Because of the wide variety of possible combinations that can be encountered, observe the most stringent cautions and limitations on the label of all products used in mixtures.

This product should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Agitation is recommended.

### FROST INJURY PROTECTION

**BACTERIAL ICE NUCLEATION INHIBITOR:** Application of this product made to all crops listed on this label at rates and stages of growth indicated on this label, at least 24 hours prior to anticipated frost conditions, will afford control of ice nucleating bacteria (*Pseudomonas syringae*, *Erwinia herbicola*, and *Pseudomonas fluorescens*) and may therefore provide some protection against light frost. Not recommended for those geographical areas where weather conditions favor severe frost.

**NOTE: ALL USE RATES LISTED BELOW ARE LBS. OF THIS PRODUCT PER ACRE UNLESS OTHERWISE INDICATED.**

**CITRUS**

This product may be mixed with dry foliar nutritionals (micronutrients) to create "Shot Bag" mixes to meet the various nutritional requirements of citrus and provide disease protection as described on this label. The product per acre rates in these mixes must not exceed the maximum specified label rates for disease control. Adding foliar nutritionals to spray mixtures containing this product or other products and applying to citrus during the post bloom period when young fruit are present may result in spray burn. Do not use this product on citrus seedlings less than two years old in greenhouses or shadehouses. The maximum single application rate is 6.3 lbs. per Acre.

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
CITRUS	Melanose, Scab, Algal Spot	4.0-6.3	25.2	7	Apply as pre-bloom and post-bloom sprays.
	Greasy Spot, Pink Pitting	4.0-6.3			Apply in Summer on expanded new flush. Repeat on subsequent flushes if disease conditions are present.
	Brown Rot	4.0-6.3			Begin application in Fall. Apply to skirts of trees to a height of at least 4 feet. Apply also to bare ground one foot beyond skirt.
	Alternaria Brown Rot (SUPPRESSION)*	4.0-6.3			On susceptible varieties apply 6.3 lbs. per Acre when the first Spring flush appears and each flush thereafter. Application to the fruiting bodies should start after two thirds of the petals have fallen and be repeated on a 21 day schedule.  *NOTE: (In California) In areas subject to copper injury, add 1/3 to 1 pound of high quality lime per pound of this product.
	Phytophthora Foot Rot	1.0 (in 1 gallon of water)			To treat 1 Acre, mix 1 lb. of product with 1 gallon of water or latex paint and paint trunks of trees from the soil surface to the lowest scaffold limbs or mix 1 lb. product with 1 to 2 pints of water and add mixture to 1 gallon of treehold or latex paint.  Paint trunks of trees from soil surface to the lowest scaffold limbs. Treatment serves for protection for up to 1 year, but does not cure existing infections.  NOTE: Areas where microjet or low volume irrigation hit the tree trunk may require retreatment due to wash off.
	Citrus Canker (Suppression)	6.3			Spray this product on canker flushes 7 to 14 days after shoots begin to grow. Young fruit may require an additional application. Number and timing of applications will be dependent upon disease pressure. Under heavy pressure, each flush of new growth should be sprayed.
CITRUS (Field Nursery Grown)	Melanose, Scab, Pink Pitting, Greasy Spot, Brown Rot, Citrus Canker (SUPPRESSION)	4.0-6.3	25.2	28	Apply 2 lbs. of this product per 100 gallons of water at 28 day intervals.

## FIELD CROPS

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
ALFALFA	Cercospora & Leptosphaerulina Leaf Spots	1.06	2.24	30	Apply 10 to 14 days before each harvest or earlier if disease threatens. <b>NOTE:</b> Crop injury may occur with sensitive varieties such as Lahontan. Determine the sensitivity of the variety in question by testing this product on a small area before treating an entire field.
PEANUT	Cercospora Leaf Spot	1.58	9.48	7	1 to 2 quarts of flowable sulfur per acre may be added. Begin spraying 35 to 40 days after planting or when disease symptoms first appear and repeat at 10 to 14 day intervals. Reduce sprays to 7 days during humid weather.
POTATO	Early Blight & Late Blight	1.0-4.0	50	5	Apply at 5 to 10 day intervals starting when plants are 3 to 6 inches high. Apply the lower rate in those locations where disease is light and the higher rate where disease is severe.
	Colorado Potato Beetle (SUPPRESSION)	1.0-4.0	50	5	Application of this product at rates and timing recommended for control of early blight and late blight may provide suppression of the Colorado Potato Beetle.
SUGARBEET	Cercospora Leaf Spot	2.62	15.7	10	Start spraying when conditions first favor disease development and repeat at 10 to 14 day intervals as needed.
WHEAT, OATS (Except California), BARLEY	Septoria Leaf Blotch & Helminthosporum Spot Blotch	1.06	2.12	10	Make first application by early heading and follow with second spray 10 days later. <b>NOTE:</b> Crop injury may occur with sensitive varieties. Determine the sensitivity of the variety in question by testing this product on a small area before treating an entire field.

## SMALL FRUITS

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
BRAMBLES (Aurora, Blackberry, Boysenberry, Cascade, Chehalem, Logan, Marion, Raspberry, Santiam & Thornless Evergreen)	Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, Yellow Rust, and Pseudomonas Blight.	4.0	20	7	Make Fall application after harvest. Apply delayed dormant spray after training in the Spring. Add 1 quart of crop oil per acre.
	Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, and Yellow Rust.	2.0			Apply when leaf buds begin to open and repeat when flower buds show white. Add 1 quart of superior-type oil per acre.
	<b>NOTE:</b> Crop injury may occur if applied to foliage under certain environmental conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear.				

### SMALL FRUITS (continued)

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
<b>BLUEBERRY</b> (Except California)	Bacterial Canker	4.2	16.8	7	Make first application before the Fall rains and a second application 4 weeks later.
<b>CRANBERRY</b>	Fruit Rot	4.2	12.6	7	Make first application in late bloom. One or 2 additional applications at 10 to 14 day intervals may be required depending on disease severity.
	Upright Dieback				Apply as a prebloom application. A second application can be made 10 to 14 days later if required.
	Rose Bloom				Make three applications on a 10 to 14 day schedule as soon as symptoms are observed.
	Bacterial Stem Canker				Apply post harvest and again in the Spring before bud burst. One additional application at 10 to 14 day intervals may be required depending on disease severity.
	Stem & Leaf Blight, Red Leaf Spot, Tip Blight (Monilinia)				Apply as a delayed dormant spray in the Spring. Repeat at 10 to 14 day intervals through prebloom.
<b>CURRENT, GOOSEBERRY</b>	Anthracnose, Leaf Spot	5.0	20	10	Make three applications starting after harvest followed by application before bloom and after petal fall.
<b>STRAWBERRY</b>	Leaf Spot, Leaf Blight, Angular Leaf Spot (Xanthomonas)	2.0-3.0	16.38	7	Begin application when plants are established and continue on a 7-day application schedule throughout season. <b>NOTE:</b> Crop injury may occur if applied to foliage under certain environmental conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear.

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## TREE CROPS

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
ALMOND, APRICOT, CHERRY, PLUM, PRUNE	Coryneum Blight (Shot Hole), Bacterial Canker, Bacterial Blast ( <i>Pseudomonas</i> )	8.0-16.0	36	7	Apply during dormant or late dormant period. For applications during bloom or growing season, apply 3.0 lbs. per Acre and make repeat applications at 5 day intervals.  Dormant application: Apply before Fall rains and a second application before foliage and buds begin to swell.  For Cherries, an additional application at leaf fall may be required under severe disease conditions. Do not exceed the maximum annual rate.  For Almonds, Bacterial Blast ( <i>Pseudomonas</i> ): Apply during dormant or early pink bud. For applications during bloom or growing season, apply 3.0 lbs. per Acre and make repeat applications at 5 day intervals. Do not exceed the maximum annual rate. Apply at dormant to early pink bud. For control in sprinkler irrigated orchards or where disease is severe, apply 1 to 3 lbs. per Acre at two week post-bloom intervals or just before sprinkling. Do not exceed the maximum annual rate. NOTE: Injury may occur from post-bloom sprays, especially on Neplus varieties of Almonds.
	Coryneum Blight, Brown Rot, Blossom Blight (For dormant application)	8.0-12.0			Apply before foliage buds begin to swell. For early bloom (popcorn) application: Apply 6 to 8 lbs. per Acre. Apply before full bloom. NOTE: To avoid plant injury, do not use above rate after full bloom.
APPLE	Anthracnose, European Canker, Blossom & Shoot Blast, <i>Pseudomonas</i>	12.0-16.0	32	Only 1 Application per Season Permitted	Apply during fall or late dormant periods. During bloom or growing season, apply 1.0 lb. per Acre. Apply before Fall rains. NOTE: Use on yellow varieties may cause discoloration. To avoid, pick before spraying.
	Fire Blight	8.0-12.0	12.0		Make application between silver-tip and green-tip. Apply as a full cover spray. NOTE: Crop injury may occur from late application. After ¼ inch green-tip, apply at 1 lb. per Acre.
	Crown and Collar Rots	4.0 (in 100 gallons of water)	4.0		Apply 4 gallons of suspension as a drench on the lower trunk area of each tree. Apply either in early Spring or in late Fall after harvest. NOTE: Do not use if soil pH is below 5.5 since copper toxicity may result.
AVOCADO	Scab, Blotch, Anthracnose	6.3	37.8	30	Apply when bloom buds begin to swell and continue application at monthly intervals as required for control.
BANANA	Sigatoka	2.0 (in 3 gallons of water)	37.8	21	Apply by air in 3 gallons of water containing 1/2 gallon of agricultural oil. Apply on a 7 to 14 day schedule throughout the wet season. Apply at 21 day intervals during dry periods.
	Black Pitting	4.0 (in 100 gallons of water)		7	Apply directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after fruit emergence.

**TREE CROPS (Continued)**

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
CACAO	Black Pod	4.5	31.5	14	Begin applications at the start of the rainy season and continue while infection conditions persist. Apply as often as 14 to 21 days in high rainfall areas at varying rates depending on disease severity.
COFFEE	Coffee Berry Disease <i>(Collectotrichum coffeanum)</i>	4.2	25.2	14	Apply first spray after flowering and before onset of long rains and then at 21 to 28 day intervals until picking.
	Bacterial Blight <i>(Pseudomonas syringae)</i>	4.2			Begin spray program before onset of the long rains and continue throughout the rainy season at 14 to 21 day intervals. The critical time of spraying to control this disease is just before, during, and after flowering(s), especially when coinciding with wet weather.
	Leaf Rust ( <i>Hemileia vastatrix</i> )	2.0-4.0			Apply before the onset of rain and then at 21 day intervals while the rains continue. Use higher rates when rainfall is heavy and disease pressure is high.
	Iron Spot ( <i>Cercospora coffeicola</i> ) and Pink Disease ( <i>Corticium salmonicolor</i> )	2.0			Use concentrate or dilute spray. Begin treatment at the start of wet season and continue at monthly intervals for three applications.
FILBERT (Washington and Oregon only)	Bacterial Blight	12.0	48	14	Apply as a post harvest spray. In seasons of heavy rainfall apply a second spray when three-fourths of the leaves have dropped, but no sooner than 14 days after the first application. Add 1 pint of superior-type oil per 100 gallons of water depending on disease pressure.
	Eastern Filbert Blight				Apply in sufficient water to obtain thorough coverage. Make initial application at budswell to budbreak. Additional sprays should be made on a 14 day interval depending on disease severity. Add 1 pint of superior-type oil per 100 gallons of water.
MANGO (Florida and Puerto Rico only)	Anthraxnose	5.2	36.4	30	Apply at 30 day intervals after fruit set until harvest.
OLIVE	Peacock Spot, Olive Knot	6.3	12.6	30	Make first application before Winter rains fall. A second application no sooner than 30 days after the first application in early Spring should be made if disease is severe.
PEACH, NECTARINE	Leaf Curl, Coryneum Blight (Shothole), Bacterial Canker, Blast ( <i>Pseudomonas</i> ), Bacterial Spot ( <i>Xanthomonas</i> )	8.0-16.0	36	7	Apply at 7 day intervals after leaf fall as a dormant or late dormant application. Use the higher rate when rainfall is very heavy and disease pressure is high. May be used with an agricultural spray oil.
	Brown, Rot, Blossom Blight, Leaf Curl, Coryneum Blight	3.0			Apply as a full cover spray at pink bud (during bloom and growing season). Application at this time affords some control of <i>Leaf Curl</i> and <i>Coryneum Blight</i> . Dormant Spray: Apply at 8 to 16 lbs.
NOTE: Do not spray three weeks prior to harvest. Use only specified rates. Spotting of leaves and defoliation may occur from use in cover sprays.					

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**TREE CROPS (continued)**

CROP	DISEASE	RATE / ACRE (LBS. OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
PEAR	Fire Blight	1.0	32.0	5	Apply at 5 day intervals throughout bloom period.
	Pseudomonas Blight	12.0-16.0			Apply before Fall rains and again at dormant before Spring growth starts.
	<b>NOTE:</b> Excessive dosages may cause fruit russet.				
PECAN	Shuck & Kernel Rot ( <i>Phytophthora cactorum</i> ), Zonate Leaf Spot ( <i>Cristulariella pyramidalis</i> )	2.0-4.0	16.8	14	<b>Suppression Only:</b> Apply in sufficient water to ensure complete spray coverage at two to four week intervals starting at kernel growth and continuing until shucks open. Use the higher rate and shorter interval if frequent rainfall occurs.
PISTACHIO	Botrytis Blight, Botryosphaeria Panicle, Shoot Blight, Septoria Leaf Blight, Late Blight ( <i>Alternaria alternata</i> )	4.2	16.8	14	Make initial application at bud swell and repeat on a 14 to 28 day schedule as dictated by disease conditions. If disease conditions are severe, use the high rate and short spray interval.
QUINCE (except California)	Fire Blight	1.0	32.0	5	Apply at 5 day intervals through bloom period. Apply in sufficient water to provide thorough coverage.
WALNUT	Walnut Blight	6.3	50.4	7	Apply first application spray at early pre-bloom prior to or when catkins are partially expanded. Make applications during bloom and early nutlet stage or at 7 day intervals if frequent rainfall occurs. Thorough coverage of catkin leaves and nutlets is essential for effective control. <b>NOTE:</b> When applied as a dilute spray, 1 pint of summer oil emulsion may be added per 100 gallons of spray. Adequate control may not be obtained when copper tolerant species of <i>Xanthomonas</i> bacteria are present.

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## VEGETABLES

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
BEAN (Dry and Green)	Bacterial Blight (Halo & Common), Brown Spot	1.58	9.48	7	For protective sprays, make first application when plants are six inches high; repeat on a 7 to 14 day schedule depending upon local conditions.
BEETS (Table Beets, Beet Greens)	Cercospora Leaf Spot	2.02	15.7	10	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals.
CRUCIFERS Broccoli, Brussels Sprout, Cauliflower, Collard (except California), Mustard and Turnip Greens	Black Rot ( <i>Xanthomonas</i> ), Black Leaf Spot ( <i>Alternaria</i> ), Downy Mildew	1.06	5.3	7	Apply at 7 to 10 day intervals. For control of disease of these crops, begin application after transplants are set in the field, or shortly after emergence of field seeded crops or when conditions favor disease development. Use short interval when conditions favor disease. <b>NOTE:</b> Reddening of older leaves may occur on Broccoli.
CABBAGE	Downy Mildew	0.5-1.0	5.3	7	Apply at seven day intervals. Use higher rate when conditions favor disease.
	Black Rot ( <i>Xanthomonas</i> ), Black Leaf Spot ( <i>Alternaria</i> )	1.06			Apply at 7 to 10 day intervals beginning after transplants are set in field or shortly after emergence of field seeded crops or when conditions favor disease development.
CARROT	Cercospora Leaf Spot	2.0	10	7	Begin application when disease first threatens and repeat at 7 to 14 day intervals as needed depending on disease severity.
CELERY, CELERIAC (except California)	Cercospora Early Blight, Septoria Late Blight, Bacterial Blight	2.0	10.6	7	Begin applications as soon as plants are first established in the field, repeating at 7 day intervals depending on disease severity and environmental conditions.
CUCURBITS Cantaloupe, Cucumber, Honeydew, Muskmelon, Pumpkin, Squash, Watermelon, Casaba, Chayote, Gourds	Alternaria Leaf Spot, Angular Leaf Spot, Anthracnose, Downy & Powdery Mildew, Gummy Stem Blight, Watermelon Bacterial Fruit Blotch (Suppression)	1.5-2.0	10.5	5	Begin application when conditions are favorable for disease development. Repeat at 5 to 7 day intervals or as needed. <b>NOTE:</b> Crop injury may occur from application at higher rates and shorter intervals. Discontinue use if injury occurs.
EGGPLANT	Alternaria Blight, Anthracnose, Phomopsis	1.58	15.8	7	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals or as needed depending on disease severity.
ONION, GARLIC	Purple Blotch, Downy Mildew, Bacterial Blight	2.0	12.0	7	Begin when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals as needed depending upon disease pressure.

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### VEGETABLES (Continued)

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
PEA	Powdery Mildew	1.58	7.9	7	Begin applications when disease symptoms first appear and repeat at weekly intervals as needed.
PEPPER	Bacterial Spot	1.58	23.7	3	When disease threatens, apply in sufficient water for adequate coverage at 3 to 10 day intervals depending on disease severity.
SPINACH	Anthracnose, White Rust, Downy Mildew, Cercospora Leaf Spot, Black Leaf Spot, Blue Mold	1.0-1.58	7.9	7	Begin application when disease first appears or when conditions favor disease development. Repeat at 7 to 10 day intervals as needed. <b>NOTE:</b> Flecking may occur on Spinach leaves.
TOMATO	Early & Late Blight Bacterial Spot, Anthracnose, Gray Leaf Mold, Septoria Leaf Spot	1.06	34.8 (for processing tomatoes)	3	Begin when disease first threatens and repeat at 3 to 10 day intervals depending on disease severity.
	Bacterial Speck	2.0	16.0 (for fresh market tomatoes)		Begin applications when disease first threatens and repeat at 10 to 30 day intervals or as needed depending on disease severity.
WATERCRESS (except California)	Cercospora Leaf Spot	1.06	4.24	7	Begin application when plants are first established in the field, repeating at 7 to 14 day intervals depending on disease severity and environmental conditions. Do not exceed four applications per crop. Apply using ground spray equipment at no less than 50 gallons of spray solution per acre.

### VINES

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
GRAPE	Black Rot, Powdery & Downy Mildew, Phomopsis	2.0-6.0	40.0	3	Begin application at bud break with subsequent applications throughout the season depending upon disease severity. <b>NOTE:</b> Foliage injury may occur on copper sensitive varieties such as Concord, Delaware, Niagara, and Rosette. Either test for sensitivity or add 1 to 3 lbs. of hydrated lime per pound of this product.
HOPS	Downy Mildew	1.06	5.3	10	Make crown treatment after pruning, but before training. After training, if additional treatments are needed apply 10 days after the initial treatment. <b>NOTE:</b> Discontinue use two weeks before harvest.
KIWI	<i>Pseudomonas syringae</i> , <i>Erwinia herbicola</i> , <i>Pseudomonas fluorescens</i>	4.0 (in 200 gallons of water)	12.6	30	Make subsequent applications at 30 day intervals. A maximum of 3 applications may be made.

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## MISCELLANEOUS

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
ATE MOYA (except California)	Anthracoese	3.0-6.3	25.2	7	Make initial application just before flowering and repeat on a 7 day spray interval until just before harvest. Apply in sufficient water for thorough coverage.
CARAMBOLA (except California)	Anthracoese	4.2	21.0	7	Make initial application just before flowering and repeat on a 7 day spray interval until just before harvest. Apply in sufficient water for thorough coverage.
CHIVES (except California)	Downy Mildew	1.06	5.3	7	Begin application when plants are established in the field. Repeat applications every 7 to 10 days as dictated by disease conditions. If disease pressure is high, use the shorter spray interval.
DILL (except California)	Phoma Leaf Spot, Rhizoctonia Foliage Blight	1.58	7.9	7	Begin applications when plants are first established in the field and repeat at 7 to 10 day intervals depending upon disease severity and environmental conditions.
DOUGLAS FIR (except California)	Rhabdocline Needlecast	2.0	40.0	21	Begin applications at bud break and repeat at three to four week intervals. Apply in a tank mix with another registered pesticide if moderate to severe disease pressure is present.
GINSENG	Alternaria Leaf Blight, Stem Blight	2.1	10.5	7	Use as a tank mix with 2 pounds Rovral@50W in 100 gallons of water. Begin CHAMPION WETTABLE POWDER-Rovral applications as soon as plants have emerged in Spring. Applications should be repeated every seven days until plants become dormant in Fall. Do not make more than 5 applications at the 2.1 lb. per Acre rate. If scheduled application is to be made before a rain shower, apply fungicides at least eight hours before the rain, giving the fungicides time to dry on the plants. Use of a spreader-sticker or sticker is advised. NOTE: <i>Alternaria Leaf &amp; Stem Blight</i> is most severe in humid conditions such as those found in the dense canopies to 2, 3 and 4 year old Ginseng. It is very important that the stems be thoroughly covered with fungicide; therefore, use a spray apparatus which distributes the fungicide throughout the canopy.
GUAVA (except California)	Anthracoese, Red Algae	2.46	9.84	7	Make initial application just before flowering and repeat on a 7 day spray interval until just before harvest. Apply in sufficient water for thorough coverage.
LITCHI (except California)	Anthracoese	2.46	9.84	7	Make initial application just before flowering and repeat on a 7 day schedule until just before harvest. Apply in sufficient water for thorough coverage.
LIVE OAK (Texas & Florida Only)	Ball Moss	4.0 (in 100 gallons of water)	40.0	12 months	Apply in the Spring when ball moss is actively growing, using 1-1/2 gallons of spray per foot of tree height. Make sure to wet ball moss tufts thoroughly. A second application may be required after 12 months. NOTE: This product may be injurious to ornamentals grown under Live Oaks. This product may be reactive on metal and masonry surfaces such as galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.
MACADAMIA	Anthracoese	4.72	18.9	7	Initiate sprays at first sign of flowering and repeat in a 7 day schedule until just before harvest. Apply in sufficient water for thorough coverage.
	Phytophthora Blight ( <i>P. capsici</i> ), Raceme Blight ( <i>Botrytis cinerea</i> )				Apply at 7 day intervals during raceme development and bloom periods. Apply in sufficient water for thorough coverage.

**MISCELLANEOUS (Continued)**

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
MAMEY SAPOTE (except California)	Anthracnose, Algal Leaf Spot	4.2	16.8	14	Apply when conditions favor disease development. Repeat on 14 to 30 day schedule. Apply in sufficient water for thorough coverage.
PAPAYA (except California)	Anthracnose	5.26	42.4	10	Begin applications before disease appears and repeat at 10 to 14 day intervals. Use higher rates when conditions favor disease.
PARSLEY (except California)	Bacterial Blight	2.0	4.0	10	Begin applications when plants are first established in the field and repeat at 10 day intervals depending upon disease severity and environmental conditions.
PASSION FRUIT (except California)	Anthracnose	4.72	18.9	7	Make initial application just before flowering and repeat on a 7 day spray interval until just before harvest. Apply in sufficient water for thorough coverage.
PERSIMMON	Cercospora Leaf Spot	2.0 (in 100 gallons of water)	12.0	14	Apply beginning in May/June, during leaf flush, and repeat at 14 day intervals throughout the season depending on disease severity.
SUGAR APPLE (ANNONA) (except California)	Anthracnose	6.3	25.2	7	Make initial application just before flowering and repeat on a 7 day spray interval until just before harvest. Apply in sufficient water for thorough coverage.
SYCAMORE	Anthracnose	2.0-4.0 (in 100 gallons of water)	40.0	7	Apply as a full cover spray. Apply in sufficient volume for thorough coverage. Make first application at bud crack and second application 7 to 10 days later at 10% leaf expansion.

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## GREENHOUSE AND SHADE HOUSE CROPS

Notice to User: This product may be used in greenhouses and shade houses to control diseases on some crops which appear on this label. The grower should bear in mind that the sensitivity of crops grown in greenhouses and shade houses differ greatly from crops grown under field conditions. Neither the manufacturer nor seller has determined whether or not this product can be used safely on all greenhouse and shade house-grown crops. The user should determine if this product can be used safely prior to commercial use. In a small area, apply the specified rates to the plants in question, i.e. foliage, fruit, etc., and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use.

Apply this product according to specific rates given for those crops in pounds per acre or pounds per 100 gallons. Two (2) level tablespoons of this product per 1000 square feet is equivalent to 0.52 lbs metallic copper per acre. One level tablespoon of this product per gallon of water is equivalent to 1 pound per 100 gallons. This product should be applied in adequate water for thorough coverage of plant parts. Begin application at first sign of disease and repeat at 7 to 14 day intervals as needed; use shorter interval during periods when severe disease conditions persist.

Do not use this product on citrus seedlings less than two years old in greenhouses or shadehouses. NOTE: Rates listed per 1000 square feet.

CROP	DISEASE	RATE (Tablespoons)	USE INSTRUCTIONS
EGGPLANT	Alternaria Blight, Anthracnose, Phomopsis	3.0	Begin application prior to development of disease symptoms. Repeat sprays at 7 to 10 day. Do not apply more than 15.8 lbs. per Acre per crop cycle.
PEPPER	Bacterial Spot	3.0	Begin applications when conditions first favor disease development and repeat at 3 to 10 day intervals as needed depending on disease severity. Do not apply more than 23.7 lbs. per Acre per crop cycle.
TOMATO	Early & Late Blight, Bacterial Speck, Bacterial Spot, Anthracnose, Gray Leaf Mold, Septoria Leaf Spot	2.0	Begin when disease first threatens and repeat at 3 to 10 intervals depending on disease severity. Do not apply more than 34.8 lbs. per Acre per crop cycle on tomatoes for processing. Do not apply more than 16.0 lbs per Acre per crop cycle on tomatoes for fresh market.
CITRUS (Non-Bearing Nursery)	Melanose, Scab, Pink Pitting, Greasy Spot, Brown Rot, Citrus Canker	11.5	Begin applications when disease threatens. Repeat at 30 day intervals. The maximum single rate permitted is 6.3 lbs. per Acre. Do not apply more than 25.2 lbs. per Acre per crop cycle. The minimum interval between treatments is 7 days.

## TURFGRASS (Except California)

CROP	DISEASE	RATE / ACRE (LBS OF PRODUCT)		Minimum Retreatment Interval (days)	USE INSTRUCTIONS
		Per Application	Maximum Annual		
TURFGRASS	Algae Control	0.14 per 1,000 square feet	18.0	10	Apply in 5 gallons of water to control algae. This product may be used alone or in combination with other registered fungicides as a maintenance spray. Observe the most stringent precautions and limitations on the label of each product used in tank mixes. NOTE: Phytotoxicity may occur depending upon varietal differences. Apply the specific rate to a small area and observe for 7 to 10 days for signs of injury. If phytotoxicity occurs, discontinue use. Do not apply in spray solutions with a pH less than 6.5.

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## ORNAMENTALS

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**Notice to User:** Plant sensitivities to this product have been found to be acceptable in specific genera and species listed on this label, however, it is impossible to know sensitivities under all conditions and phytotoxicity may occur. Due to the large number of species and varieties of ornamentals and nursery plants, it is impossible to test every one for sensitivity to this product. Neither the manufacturer nor seller recommends use upon species not listed on the label. The user should determine if this product can be used safely prior to commercial use. In a small area, apply the specified rates to the plants in question, i.e. bedding plants, foliage, etc., and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use.

Use this product on container, bench or bed-grown ornamentals in greenhouses, shade houses or outdoor nurseries, for professional use on ornamentals grown for indoor and outdoor landscaping, and for control of bacterial and fungal diseases of foliage, flowers and stems.

For Control of Disease on Ornamentals in Greenhouses, Fields and Nurseries: Apply as a thorough coverage spray using 0.5 lb. of this product per 100 gallons of water. One-half tablespoon of this product per gallon of water is equivalent to 0.5 lb. per 100 gallons. Apply no more than 800 gallons solution per acre dilute per application (equivalent to 0.05 to 2.0 lbs metallic copper per acre) depending on the size of the ornamental. Do not make more than 10 applications at these rates per year (maximum of 20.0 lbs metallic copper per acre per year). **Note:** Compact flowers may take as little as 20 gallons solution per acre while large trees may take as much as 800 gallons solution per acre. Begin application at first sign of disease and repeat at 7 to 14 day intervals or as needed; use shorter interval during periods of frequent rains or when severe disease conditions persist.

This product may be used alone or in combination with other registered fungicides as a maintenance spray. Observe all precautions and limitations on the label of each product used in tank mixes.

**NOTE:** Do not tank mix this product with Aliette® fungicide unless appropriate precautions have been taken to buffer the spray solution. Severe phytotoxicity may result if adequate precautions are not taken.

Crop	Latin	Disease
Aglaonema	<i>Aglaonema</i>	Bacterial Leaf Spot
Althea (Rose of Sharon)*	<i>Hibiscus syriacus</i>	Bacterial Leaf Spot
Aralia	<i>Dizygotheca elegantissima</i>	Xanthomonas & Cercospora Leaf Spots, Alternaria
Arborvitae*	<i>Thuja spp.</i>	Alternaria Twig Blight, Cercospora Leaf Blight
Azalea	<i>Rhododendron spp.</i>	Cercospora Leaf Spot, Botrytis Blight, Dieback, Phytophthora, Powdery Mildew
Begonia	<i>Begonia semperflorens</i>	Bacterial Leaf Spot ( <i>Xanthomonas spp.</i> , <i>Erwina spp.</i> , <i>Pseudomonas spp.</i> )
Boston Fern	<i>Nephrolepis exalta blightata</i>	Bacterial Leaf Spot
Bougainvillea*	<i>Bougainvillea spectabilis</i>	Anthracnose, Bacterial Leaf Spot
Bulbs (Tulip, Gladiolus)	<i>Miscellaneous</i>	Anthracnose, Botrytis Blight
Camelia	<i>Camellia japonica</i> , <i>C. sasanqua</i>	Anthracnose, Botrytis Blight, Bacterial Leaf Spot
Camphor Tree*	<i>Cinnamomum camphora</i>	Pseudomonas Leaf Spot
Canna	<i>Canna spp.</i>	Pseudomonas Leaf Spot
Carnation	<i>Dianthus spp.</i>	Alternaria Blight, Pseudomonas Leaf Spot, Botrytis Blight
Chinese Tallow Tree*	<i>Sapium sebiferum</i>	Bacterial Leaf Spot ( <i>Xanthomonas spp.</i> , <i>Pseudomonas spp.</i> )
Chrysanthemum	<i>Chrysanthemum morifolium</i>	Septoria Leaf Spot, Botrytis Blight
Cotoneaster	<i>Cotoneaster spp.</i>	Botrytis Blight
Dahlia*	<i>Dahlia pinnata</i>	Alternaria Leaf Spot, Botrytis Gray Mold, Cercospora Leaf Spot
Date Palm*	<i>Phoenix canariensis</i>	Pestalotia Leaf Spot
Dianthus*	<i>Dianthus spp.</i>	Bacterial Spot, Bacterial Soft Rot
Dogwood*	<i>Cornus florida</i>	Anthracnose
Dracaena	<i>Dracaena marginata</i>	Bacterial Leaf Spot
Dumb Cane	<i>Dieffenbachia</i>	Bacterial Leaf Spot
Dusty Miller*	<i>Senecio cineraria</i>	Bacterial Leaf Spot ( <i>Pseudomonas cichorii</i> )
Easter Lily**	<i>Lilium longiflorum</i>	Botrytis Blight
Echinacea*	<i>Echinacea spp.</i>	Bacterial Leaf Spot ( <i>Pseudomonas cichorii</i> )
Elm "Drake"*	<i>Ulmus parvifolia</i>	Xanthomonas Leaf Spot
Euonymus	<i>Euonymus spp.</i>	Botrytis Blight, Anthracnose
European Fan Palm*	<i>Champaerops numilis</i>	Pestalotia Leaf Spot

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Crop	Latin	Disease
Gardenia*	<i>Gardenia jasminoides</i>	Alternaria Leaf Spot, Botrytis Bud Rot, Cercospora Leaf Spot
Geranium*	<i>Pelargonium spp.</i>	Alternaria Leaf Spot, Botrytis Gray Mold, Cercospora Leaf Spot
Gladiolus*	<i>Gladiolus spp.</i>	Alternaria Leaf Spot, Botrytis Gray Mold, Bacterial Leaf Blight
Golden Rain Tree	<i>Koelreuteria paniculata</i>	Bacterial Leaf Spot
Grape Ivy	<i>Cissus spp.</i>	Bacterial Leaf Spot
Hibiscus**	<i>Hibiscus rosa sinensis</i>	Bacterial Leaf Spot
Hibiscus, Rose Mallow**	<i>Common Rose Mallow</i>	Bacterial Leaf Spot
Holly Fern*	<i>Cyrtomium falcatum</i>	Pseudomonas Leaf Spot
Honey Locust	<i>Gleditsia triacanthos</i>	Bacterial Leaf Spot
Impatiens*	<i>Impatiens sallerana</i>	Bacterial Leaf Spot
India Hawthorne**	<i>Raphiolepis indica</i>	Anthraco-nose, Entomosporium Leaf Spot
Ivy (English, Algerian)	<i>Hendera helix, H. canariensis</i>	Xanthomonas Leaf Spot
Ixora*	<i>Ixora coccinea</i>	Xanthomonas Leaf Spot
Juniper (Eastern Red Cedar)*	<i>Juniperus virginiana</i>	Anthraco-nose
Lantana*	<i>Lantana camera</i>	Bacterial Leaf Spot
Lilac*	<i>Syringa spp.</i>	Cercospora Leaf Spot
Loblolly Bay*	<i>Gordonia lasianthus</i>	Anthraco-nose
Loquat*	<i>Eriobotrya japonca</i>	<i>Entomosporium maculata, Colletotrichum spp.</i>
Magnolia (Southern)*	<i>Magnolia grandiflora</i>	Algal Leaf Spot, Anthracnose, Bacterial Leaf Spot
Magnolia (Sweet Bay)*	<i>Magnolia virginiana</i>	Anthraco-nose
Magnolia*	<i>Magnolia soulangiana</i>	Bacterial Leaf Spot
Mandevillas*	<i>Mandevilla spp.</i>	Anthraco-nose
Marigold*	<i>Tagetes spp.</i>	Alternaria Leaf Spot, Botrytis Leaf & Flower Rot, Cercospora Leaf Spot
Mulberry, Contorted	<i>Morus bombycis</i>	Bacterial Leaf Spot
Mulberry, Weeping*	<i>Morus alba</i>	Bacterial Leaf Spot
Nephtytis	<i>Syngonium podophyllum</i>	Bacterial Leaf Spot
Oak, Laurel	<i>Quercus laurifolia</i>	Algal Leaf Spot ( <i>Cephaleuros virescens</i> )
Oleander*	<i>Nerium oleander</i>	Bacterial Leaf Spot, Fungal Leaf Spot
Pachysandra	<i>Pachysandra procumbens</i>	Volutella Leaf Blight
Pansy*	<i>Viola spp.</i>	Downy mildew
Parlor Palm	<i>Chamaedorea procumbens</i>	Bacterial Leaf Spot
Pear (Flowering)*	<i>Pyrus calleryana</i>	Fireblight, Leaf Spot
Pentas (Egyptian Star)*	<i>Pentas spp.</i>	Bacterial Leaf Spot ( <i>Xanthomomas spp.</i> )
Peony*	<i>Paeonia spp.</i>	Botrytis blight
Periwinkle	<i>Catharanthus roseus, Vinca spp.</i>	Phomopsis Stem Blight
Philodendron*	<i>Philodendron selloum</i>	Bacterial Leaf Spot
Phlox*	<i>Phlox spp.</i>	Alternaria Leaf Spot
Photinia (Red Tip, Red Leaf)	<i>Photinia fraserii, P. glabra</i>	Anthraco-nose, Entomosporium
Pistachio*	<i>Pistacia chinensis</i>	Anthraco-nose
Plantain Lily*	<i>Hosta spp.</i>	Bacterial Leaf Spot
Powder Puff Plant*	<i>Callindra spp.</i>	Bacterial Leaf Spot
Purple Osier Willow	<i>Salix purpurea</i>	Anthraco-nose
Pyracantha	<i>Pyracantha spp.</i>	Fireblight, Scab
Queen Palm*	<i>Arecastrum romanzoffianum</i>	Exosporium Leaf Spot, Phytophthora Bud Rot
Rhododendron	<i>Rhododendron spp.</i>	Alternaria Flower Spot
Rose	<i>Rosa spp.</i>	Powdery Mildew, Black Spot
Snapdragon	<i>Antirrhinum majus</i>	Anthraco-nose, Dieback, Downy Mildew
Spathe Flower	<i>Spathiphyllum</i>	Bacterial Leaf Spot
Tatarian Honeysuckle	<i>Lonicera tatarica</i>	Bacterial Leaf Spot
Umbrella Tree	<i>Schefflera spp.</i>	Bacterial Leaf Spot
Verbena*	<i>Verbena spp.</i>	Xanthomonas Leaf Spot



Crop	Latin	Disease
Viburnum*	<i>Viburnum odoratissimum</i> , <i>V. suspensum</i>	Anthracnose
Washingtonia Palm*	<i>Washingtonia robusta</i>	Pestalotia Leaf Spot
Weeping Fig	<i>Ficus benjamina l.</i>	Bacterial Leaf Spot
Weeping Willow*	<i>Salix babylonica</i>	Anthracnose
Yucca (Adam's needle)	<i>Yucca spp.</i>	Cercospora & Septoria Leaf Spot

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**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store in a cool dry place.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest Environmental Protection Agency regional office for guidance.

**[Nonrefillable plastic containers]**

**CONTAINER DISPOSAL: Nonrefillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

**[Nonrefillable Containers 5 Gallons or Less:]**

**Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration. Do not burn unless permitted by state and local ordinance If burned stay out of smoke.

**[Nonrefillable containers larger than 5 Gallons:]**

**Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration. Do not burn unless permitted by state and local ordinance If burned stay out of smoke.

**[Nonrefillable bags]**

**CONTAINER DISPOSAL: Nonrefillable container.** Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration. Do not burn unless permitted by state and local ordinance. If burned, stay out of smoke.

**[Refillable drum with a Nonrefillable liner]**

**CONTAINER HANDLING:** Refill this container with pesticide only. Do not use this container for any other purpose. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities by burning. If burned, stay out of smoke. If drum is contaminated and cannot be reused, dispose of in the same manner required for its liner. To recycle, contact Nufarm's Customer Service Department at 1-800-345-3330 to arrange for return of the empty refillable container.

**WARRANTY DISCLAIMER**

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## LIMITATION OF LIABILITY

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**LABEL HISTORY**

<b>File Name</b>	<b>Revision Mark</b>	<b>Comment</b>
055146-0001.20100823.MASTER	RV082310	Reregistration
055146-0001.20100924.Revised_label	RV092410	Reformatted crop specific use directions from paragraph style to table format. Revised Storage and Disposal per PR Notice 2007-4.