# Champ® WG

### **Agricultural Fungicide**

NOT FOR RESIDENTIAL USE Intended for Agricultural or Commercial Use

#### **ACTIVE INGREDIENT:**

Copper Hydroxide* (CAS No. 20427-59-2	2)77.0%
OTHER INGREDIENTS:	23.0%
TOTAL:	
*Motallic Copper Equivalent 50 0%	

<sup>\*</sup>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 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

Manufactured for Nufarm Americas Inc. AGT Division 11901 S. Austin Avenue Alsip, IL 60803



## 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 Controls 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
IF IN EYES	<ul> <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>
IF ON SKIN OR CLOTHING	<ul> <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>
IF SWALLOWED	<ul> <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>
IF INHALED	<ul> <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>

#### HOTLINE 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.

#### 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 INFORMATION AND USE INSTRUCTIONS

This product is adaptable to spraying from aircraft and ground spraying equipment. The volume applied per acre will differ depending on the equipment used and the specific crop. Refer to the Minimum Spray Mixture Volume table below:

MIXING INSTRUCTIONS: Proper mixing of this product with water requires use of a spray tank equipped with agitation.

Mixing Order

- 1. Water: Begin by agitating a thoroughly clean sprayer tank containing one-half the required amount of clean water.
- 2. Agitation: Maintain constant agitation throughout mixing and application.
- 3. Inductor: If an inductor is used, rinse it thoroughly after each application. Add CHAMP WG at a slow rate to prevent system and/or port blockage.
- 4. CHAMP WG: Slowly add the required amount of this product to the sprayer tank.
- 5. Remaining Quantity of Water: Slowly add the remaining volume of clean water.
- 6. Additives: Add any tank mix partners last. Make sure that CHAMP WG is thoroughly mixed and dispersed before addition of additives. If you do not have previous experience with CHAMP WG and additive mixtures, conduct a small-jar test to confirm compatibility of tank mixtures prior to full scale use. Follow the most restrictive label limitations for tank mix additives.

Maintain constant agitation during application.

#### **Minimum Spray Mixture Volume (Gallons per Acre)**

	Aerial Application	Ground Application (Gal/A)			
	(Gal/A)	Dilute Spray Mixture	Concentrate Spray Mixture		
Vegetables	3	20			
Field Crops	3	20			
Small Fruits	5	150	50		
Vines	5	150	50		
Tree Crops	10	400	50		
Citrus	10	800	100 (20 – Florida)		
Miscellaneous	10	150	50		

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.

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 affect 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 off 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

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 back flow. 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.

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 LB 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 lb per acre.

CROP	DISEASE	RATE / A LB OF PRO (Lb of Metalli	DUCT	Minimum Retreatment Interval	USE INSTRUCTIONS
		Per Application	Maximum Annual	(days)	
	Melanose, Scab, Algal Spot	4.0-6.3 (2.0-3.15)			Apply as pre-bloom and post-bloom sprays.
	Greasy Spot, Pink Pitting	4.0-6.3 (2.0-3.15)			Apply in summer on expanded new flush. Repeat on subsequent flushes if disease conditions are present.
	Brown Rot, Septoria Spot	4.0-6.3 (2.0-3.15)	25.2 (12.6)		Begin applications in fall before or just after the first rain and continue as needed. For Brown Rot: Apply to skirts of trees to a height of at least 4 feet. For Septoria Spot or if fruit have already been infected with Brown Rot: Apply to the entitree. Apply also to bare ground one foot beyond skirt.  *NOTE: (In California) In areas subject to copper injury, add 1/3 to 1 pound of higuality lime per pound of this product.  On susceptible varieties apply 6.3 lb per acre when the first Spring flush appea and each flush thereafter. Application to fruit should start after two thirds of the petals have fallen and be repeated on a 7 to 21 day schedule.
CITRUS	Alternaria Brown Spot (SUPPRESSION)*	4.0-6.3 (2.0-3.15)			
	Phytophthora Foot Rot	1.0 (0.5) (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 (3.15)			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 (2.0-3.15)	25.2 (12.6)	28	Apply in 100 gallons of water per acre at 28 day intervals.

#### **FIELD CROPS**

CROP	DISEASE	RATE / A LB OF PRO (Lb of Metallio	DUCT	Minimum Retreatment	USE INSTRUCTIONS
		Per Application	Maximum Annual	(days)	
ALFALFA	Cercospora & Leptosphaerulina Leaf Spots	1.0 (0.5)	2.24 (1.12)	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	1.5 (0.75)	9.48 (4.74)	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 7 to 14 day intervals. Reduce spray interval to 7 days during humid weather.
РОТАТО	Early Blight & Late Blight	1.0-5.0 (0.5-2.5)	50 (25)	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)	2.0-4.0 (1.0-2.0)	50 (25)	5	Application of this product at the timing recommended for control of early blight and late blight may provide suppression of the Colorado Potato Beetle.
SUGARBEET	Cercospora Leaf Spot	2.0-2.5 (1.0-1.25)	15.7 (7.85)	10	Start spraying when conditions first favor disease development and repeat at 10 to 14 day intervals as needed.
WHEAT OATS BARLEY	Fusarium Head Blight (Suppression) * Helminthosporum Spot Blotch Powdery Mildew (Suppression) Stagonospora Leaf and Glume Blotch Stem Rust *	1.0 (0.5)	2.12 (1.06)	10	Make first application by early heading and follow with second spray 10 days later.  NOTE: 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.  *Not registered for use in California

#### **SMALL FRUITS**

CROP	DISEASE	RATE / ACRE LB OF PRODUCT (Lb of Metallic Copper)		Minimum Retreatment Interval	USE INSTRUCTIONS		
		Per Application	Maximum Annual	(days)			
BRAMBLES (Aurora, Blackberry, Boysenberry, Cascade,	Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, Yellow Rust, and Pseudomonas Blight.	4.0 (2.0)	20 (10)	20 (10) 7	Make fall application after harvest. Apply delayed dormant spray after training in the spring. Add 1 quart of crop oil per acre.		
Chehalem, Logan, Marion, Raspberry, Santiam &	Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, and Yellow Rust.	2.0 (1.0)			Apply when leaf buds begin to open and repeat when flower buds show white. Add 1 quart of superior-type oil per acre.		
Thornless Evergreen)	NOTE: 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.						
BLUEBERRY	Bacterial Canker	3.0-4.2 (1.5-2.1)	16.8 (8.4)	7	Make first application before the fall rains and a second application 4 weeks later.		
	Fruit Rot				Make first application in late bloom. One or 2 additional applications at 7 to 14 day intervals may be required depending on disease severity.		
	Upright Dieback				Apply as a prebloom application. A second application can be made 7 to 14 days later if required.		
CRANBERRY	Rose Bloom	4.2 (2.1)	12.6 (6.3)		Make three applications on a 7 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 7 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 7 to 14 day intervals through prebloom.		
CURRANT, GOOSEBERRY	Anthracnose, Leaf Spot	5.0 – 8.0 (2.5-4.0)	20 (10)	10	Make three applications starting after harvest followed by application before bloom and after petal fall.		
STRAWBERRY	Leaf Spot, Leaf Blight, Angular Leaf Spot (Xanthomonas)	2.0-3.0 (1.0-1.5)	16.38 (8.19)	7	Begin application when plants are established and continue on a 7-day application schedule throughout season.  NOTE: 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.		

#### TREE CROPS

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CROP	DISEASE	RATE / A LB OF PRO (Lb of Metallic Per Application	DUCT	Minimum Retreatment Interval (days)	USE INSTRUCTIONS						
ALMOND APRICOT CHERRY PLUM PRUNE	Coryneum Blight (Shot Hole), Bacterial Canker, Bacterial Blast ( <i>Pseudomonas</i> )	8.0-16.0 (4.0-8.0)	36 (18)	7	Dormant application: Apply before fall rains and a second application before foliage 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 Only:  For Bacterial Blast (Pseudomonas) control in sprinkler irrigated orchards or where disease is severe, apply 1 to 3 lb 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 (Shot hole), Blossom Brown Rot	3.0 (1.5)		5	Apply during early bloom (popcorn). <b>NOTE:</b> To avoid plant injury, do not use after full bloom.						
	Anthracnose, European Canker, Blossom Blast, Shoot Blast ( <i>Pseudomonas</i> )	12.0-16.0 (6.0-8.0)	32 S		Apply before fall rains. <b>NOTE:</b> Use on yellow varieties may cause discoloration. To avoid, pick before spraying.						
	Fire Blight	8.0-12.0 (4.0-6.0)		32 S		. 32 S	32 Sea			Application per	Make one application between silver-tip and green-tip. Apply as a full cover spray. <b>NOTE:</b> Crop injury may occur from late application. After ¼ inch green-tip, apply at 1 lb per acre.
APPLE	Crown and Collar Rots	4.0 (2.0) (in 100 gallons of water)							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. <b>NOTE:</b> Do not use if soil pH is below 5.5 since copper toxicity may result.		
	Fire Blight (Bloom and Growing Season)	1.0-3.0 (0.5-1.5)					5	Extended Spray Schedule: Apply at 5 to 7 day intervals or as needed between green tip (1/2 inch) and first cover spray when fruit finish is not a concern.  NOTE: The extended spray schedule applications may cause moderate to severe crop injury. These applications are not intended for fruit going to fresh market due to the potential for fruit russetting. Adding 1 to 3 pounds of hydrated lime per pound of this product may reduce crop injury.			
AVOCADO	Scab, Blotch, Anthracnose	4.0-6.3 (2.0-3.15)	37.8 (18.9)	14	Apply when bloom buds begin to swell and continue application at 14- to 30-day intervals as required for control.						
BANANA	Sigatoka	2.1 (1.05) (in 3 gallons of water)	37.8 (18.9)	7	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.						
PLANTAIN	Black Pitting	2.1 (1.05) (in 50-100 gallons of water)		-	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.						

(continued)

#### TREE CROPS (continued)

CROP	DISEASE	RATE / A LB OF PRO (Lb of Metalli	CRE DDUCT	Minimum Retreatment Interval	USE INSTRUCTIONS	
		Per Application	Maximum Annual	(days)		
CACAO	Black Pod	3.0-4.5 (1.5-2.25)	31.5 (15.75)	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. For drier areas, make 2 to 4 applications of 2 to 4 lb of product per acre during critical infection periods. Adjust rate according to disease pressure and planting density.	
	Coffee Berry Disease (Collectotrichum coffeanum)	4.2 (2.1)			Apply first spray after flowering and before onset of long rains and then at 14 to 28 day intervals until picking.	
COFFEE	Bacterial Blight ( <i>Pseudomonas syringae</i> )	4.2 (2.1)	25.2	14	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 (Hemileia vastatrix)	3.0-4.2 (1.5-2.1)	(12.6)		Apply before the onset of rain and then at 14 to 21 day intervals while the rains continue. Use higher rates when rainfall is heavy and disease pressure is high.	
	Iron Spot ( <i>Cercospora</i> coffeicola) and Pink Disease ( <i>Corticium salmonicolor</i> )	2.0 (1.0)			Use concentrate or dilute spray. Begin treatment at the start of wet season and continue at monthly intervals for three applications.	
FILBERT	Bacterial Blight	8.0-12.0	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 for medium to severe disease pressure.	
FILDERI	Eastern Filbert Blight	(4.0-6.0)	(24)	14	Apply in sufficient water to obtain thorough coverage. Make initial application at budswell to budbreak. Additional sprays should be made at 14 day intervals depending on disease severity. Add 1 pint of superior-type oil per 100 gallons of water.	
MANGO	Anthracnose	4.0-6.4 (2.0-3.2)	36.4 (18.2)	30	Apply at 30 day intervals after fruit set until harvest.	
OLIVE	Peacock Spot, Olive Knot	5.0-12.0 (2.5-6.0)	12.6 (6.3)	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.	
	Leaf Curl, Coryneum Blight (Shot Hole), Bacterial Canker, Bacterial Blast ( <i>Pseudomonas</i> ), Bacterial Spot ( <i>Xanthomonas</i> )	8.0-16.0 (4.0-8.0)		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.
PEACH, NECTARINE	Brown Rot Blossom Blight, Leaf Curl, Coryneum Blight	8.0-12.0 (4.0-6.0)	(18)	7	Apply as a full cover spray at pink bud). Application at this time affords some control of <i>Leaf Curl</i> and <i>Coryneum Blight</i> .	
	BacterialSpot (post-bloom and growing season)	1.0-3.0 (0.5-1.5)		5	Make post-bloom applications at first and second cover sprays.	
	<b>NOTE:</b> Do not spray three weeks pri		cified rates. Spotting	of leaves and defoliation	on may occur from use in cover sprays.	
	Fire Blight	1.0–3.0 (0.5-1.5)	32.0	5	Apply at 5 day intervals throughout bloom period.	
PEAR	Pseudomonas Blight	12.0-16.0 (6.0-8.0)	(16.0)		Apply before fall rains or at dormant before spring growth starts.  Make only one application per season.	
	NOTE: Excessive dosages ma	ay cause fruit russet.				
PECAN	Shuck & Kernel Rot ( <i>Phytophthora cactorum</i> ), Zonate Leaf Spot ( <i>Cristulariella pyramidalis</i> )	2.0-4.0 (1.0-2.0)	16.8 (8.4)	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> )	3.0-4.2 (1.5-2.1)	16.8 (8.4)	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	Fire Blight	1.0–3.0 (0.5-1.5)	32.0 (16.0)	5	Apply at 5 day intervals through bloom period. Apply in sufficient water to provide thorough coverage.	
WALNUT	Walnut Blight	4.0-8.0 (2.0-4.0)	50.4 (25.2)	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 Xanthamonas bacteria are present.	

#### **VEGETABLES**

CROP	DISEASE	RATE / A LB OF PRO (Lb of Metalli	DUCT	Minimum Retreatment Interval	USE INSTRUCTIONS
		Per Application	Maximum Annual	(days)	
BEAN (Dry and Green)	Bacterial Blight (Halo & Common), Brown Spot	1.0-1.5 (0.5-0.75)	9.48 (4.74)	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	2.0-2.5 (1.0-1.25)	15.7 (7.85)	10	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals.
CRUCIFERS Broccoli, Brussels Sprout, Cauliflower, Collard Greens, Mustard Greens, Turnip Greens	Black Rot ( <i>Xanthomonas</i> ), Black Leaf Spot ( <i>Alternaria</i> ), Downy Mildew	1.0 (0.5)	5.3 (2.65)	7	Apply at 7 to 10 day intervals beginning 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.  NOTE: Reddening of older leaves may occur on Broccoli.
	Downy Mildew	0.5-1.0 (0.25-0.5)	F 0	7	Apply at seven day intervals. Use higher rate when conditions favor disease development.
CABBAGE	Black Rot (Xanthomonas), Black Leaf Spot (Alternaria)	1.06 (0.53)	5.3 (2.65)	7	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 (1.0)	10 (5)	7	Begin application when disease first threatens and repeat at 7 to 14 day intervals as needed depending on disease severity.
CELERY CELERIAC	Cercospora Early Blight, Septoria Late Blight, Bacterial Blight	2.0 (1.0)	10.6 (5.3)	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, Casaba, Chayote, Cucumber, Gourds, Honeydew, Muskmelon, Pumpkin, Squash, Watermelon,	Alternaria Leaf Spot, Angular Leaf Spot, Anthracnose, Downy & Powdery Mildew, Gummy Stem Blight, Watermelon Bacterial Fruit Blotch (Suppression)	1.5-2.0 (0.75-1.0)	10.5 (5.25)	5	Begin application when conditions are favorable for disease development. Repeat at 5 to 7 day intervals or as needed.  NOTE: Crop injury may occur from application at higher rates and shorter intervals. Discontinue use if injury occurs.
EGGPLANT	Alternaria Blight, Anthracnose, Phomopsis	1.5 (0.75)	15.8 (7.9)	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 (1.0) 1.0-1.5	12.0 (6.0)	7	Begin when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals as needed depending upon disease pressure.
PEA	Powdery Mildew	(0.5-0.75)	7.9	7	Begin applications when disease symptoms first appear and repeat at
PEPPER	Bacterial Spot	(0.75) 1.5 (0.75)	(3.95) 23.7 (11.85)	3	weekly intervals as needed.  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 (0.5-0.79)	7.9 (3.95)	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.  Do not exceed a total of 3.95 lb of metallic copper per acre per year through the use of any copper formulation for seed treatment and foliar applications.
TOMATO (processing)	Anthracnose, Bacterial Speck Bacterial Spot, Early Blight Gray Leaf Mold, Late Blight Septoria Leaf Spot	1.0 (0.5)	34.8 (17.4)	3	Begin when disease first threatens and repeat at 3 to 10 day intervals depending on disease severity.
TOMATO (fresh market)	Anthracnose, Bacterial Speck Bacterial Spot, Early Blight Gray Leaf Mold, Late Blight Septoria Leaf Spot	3.2 (1.6)	16.0 (8.0)	3	Begin when disease first threatens and repeat at 3 to 10 day intervals depending on disease severity.
WATERCRESS	Cercospora Leaf Spot	1.0 (0.5)	4.24 (2.12)	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 / A LB OF PRO (Lb of Metallic Per Application	DUCT	Minimum Retreatment Interval (days)	USE INSTRUCTIONS
GRAPE	Black Rot, Powdery & Downy Mildew, Phomopsis	2.0-6.0 (1.0-3.0)	40.0 (20.0)	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 lb of hydrated lime per pound of this product.
HOPS	Downy Mildew	1.0 (0.5)	5.3 (2.65)	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	Pseudomonas syringae, Erwinia herbicola, Pseudomonas fluorescens	4.2 (2.1) (in 200 gallons of water)	12.6 (6.3)	30	Apply at 30 day intervals. A maximum of 3 applications may be made.

#### **MISCELLANEOUS**

CROP	DISEASE	RATE / AO LB OF PRO (Lb of Metallic	DUCT	Minimum Retreatment Interval	USE INSTRUCTIONS
		Per Application	Annual	(days)	
ATEMOYA	Anthracnose	6.3 (3.15)	25.2 (12.6)	7	Make initial application just before flowering and repeat at 7-day intervals until just before harvest. Apply in sufficient water for thorough coverage.
CARAMBOLA	Anthracnose	4.2 (2.1)	21.0 (10.5)	7	Make initial application just before flowering and repeat at 7-day intervals until just before harvest. Apply in sufficient water for thorough coverage.
CHIVES	Downy Mildew	1.0 (0.5)	5.3 (2.65)	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	Phoma Leaf Spot Rhizoctonia Foliage Blight	1.5 (0.75)	7.9 (3.95)	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	Rhabdocline Needlecast	2.0 – 4.0 (1.0-2.0)	40.0 (20.0)	7	Begin applications at bud break and repeat at 7- to 28-day intervals.
GINSENG	Alternaria Leaf Blight Stem Blight	2.1 (1.05)	10.5 (5.25)	7	Use as a tank mix with an iprodione-containing fungicide at a rate of 0.5-0.75 lb ai/A (e.g., 1.0 - 1.5 pints/A of a 4lb ai/gallon formulation) 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. <b>NOTE:</b> Alternaria Leaf & Stem Blight 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	Anthracnose, Red Algae	2.46 (1.23)	9.84 (4.92)	7	Make initial application just before flowering and repeat at 7-day intervals until just before harvest. Apply in sufficient water for thorough coverage.
LITCHI	Anthracnose	2.4 (1.2)	9.84 (4.92)	7	Make initial application just before flowering and repeat at 7-day intervals until just before harvest. Apply in sufficient water for thorough coverage.
MACADAMIA	Anthracnose	4.7 (2.35)	18.9	7	Initiate sprays at first sign of flowering and repeat at 7-day intervals until just before harvest. Apply in sufficient water for thorough coverage.
IVIAGADAWIIA	Phytophthora Blight ( <i>P. capsici</i> ), Raceme Blight ( <i>Botrytis cinerea</i> )	3.0-4.0 (1.5-2.0)	(9.45)	7	Apply at 7 day intervals during raceme development and bloom periods. Apply in sufficient water for thorough coverage.
MAMEY SAPOTE	Anthracnose, Algal Leaf Spot	3.0-4.2 (1.5-2.1)	16.8 (8.4)	14	Apply when conditions favor disease development. Repeat on 14 to 30 day schedule. Apply in sufficient water for thorough coverage.
PAPAYA	Anthracnose	4.0-5.26 (2.0-2.63)	42.4 (21.2)	10	Begin applications before disease appears and repeat at 10 to 14 day intervals. Use higher rates when conditions favor disease.
PARSLEY	Bacterial Blight	2.0 (1.0)	4.0 (2.0)	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	Anthracnose	4.7 (2.35)	18.9 (9.45)	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 (1.0) (in 100 gallons of water)	12.0 (6.0)	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 (3.15)	25.2 (12.6)	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.

#### 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.

#### **CONTAINER HANDLING:**

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

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