UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

September 6, 2022

Krystal Maldonado
Regulatory Specialist, North America
Albaugh, LLC
PO Box 2127
Valdosta, GA 31604

Subject: Registration Review Label Mitigation for Copper Compounds
Product Name: COPPER HYDROXIDE 30% DF
EPA Registration Number: 42750-281
Application Date: February 11, 2019
Decision Number: 586923

Dear Krystal Maldonado:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Copper Compounds Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact DeMariah Koger by phone at (202)-566-2288, or via email at koger.demariah@epa.gov.

Sincerely,

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure

COPPER	GROUP	M01	FUNGICIDE

COPPER HYDROXIDE 30% DF

FUNGICIDE/BACTERICIDE

[Alternate Brand Name NuCop 30HB]

ACTIVE INGREDIENT:	
Copper Hydroxide*	46.1%
OTHER INGREDIENTS:	53.9%
TOTAL:	100.00%

(*Metallic Copper Equivalent - 30%)
*CAS No. 20427-59-2

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

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).

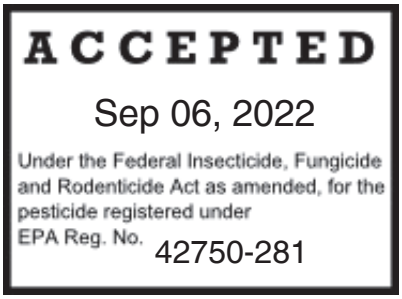
FIRST AID	
IF SWALLOWED	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything to an unconscious person.
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF INHALED	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical treatment information. NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate use of gastric lavage.	

SEE BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA Reg. No. 42750-281 EPA Est. No. 45002-MEX-02

NET CONTENTS: _____ Lbs.

Manufactured For:
Albaugh, LLC
Ankeny, IA 50021



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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

May be fatal if swallowed. Causes substantial but temporary eye injury. Harmful if inhaled. Do not get in eyes or on clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

PHYSICAL CHEMICAL HAZARD

Do not use with or store near any oxidizing or reducing agents. Hazardous chemical reaction may occur.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, PVC and viton.

Mixers, loaders, applicators and other handlers must wear the following:
1. Long-sleeved shirt and long pants
2. Chemical resistant gloves made of: barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride ≥14 mils, or viton ≥14 mils
3. Shoes plus socks
4. Protective eyewear

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 PPE. If no such instructions for washables, 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.

Pilots must use an enclosed cab that meets the definition in the WPS for agricultural pesticides [40 CFR 170.305].

USER SAFETY RECOMMENDATIONS

Users should:
1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and change into clean clothing.
3. Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

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.

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 washwater or rinsate.

PHYSICAL CHEMICAL HAZARD

Do not use with, or store near any oxidizing or reducing agents. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

Notify workers of the application by warning them orally in a manner they can understand.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical resistant gloves made of: barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride ≥14 mils, or viton ≥14 mils
- Shoes plus socks
- *Protective eyewear*

For greenhouse use the restricted entry interval (REI) is 24 hours.

For at least seven days following the application of copper-containing products in greenhouses:

- At least one container or station designed specifically for flushing eyes is available in operating conditions 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 that is located with the decontamination supplies and
    - How to operate 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 Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter until sprays have dried.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, secure, dry area in original container.
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 EPA Regional Office for guidance.
CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Offer for recycling, if available. 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.

PRODUCT INSTRUCTIONS

COPPER HYDROXIDE 30% DF may be applied by Air, or by Dilute or Concentrated Ground Sprayers, or Chemigation on crops and at rates given on this label unless specifically prohibited for that crop use. When selecting a use rate for COPPER HYDROXIDE 30% DF, do not apply less than the labeled minimum amount. Under heavy disease pressure or when conditions favor such, use the higher rate and shorter spray intervals specified for each crop. Use the higher rates for large mature tree crops. The per acre use rate is applicable for both dilute and concentrate spraying.

Sufficient spray volume and spray pressure are essential to thoroughly penetrate the plant canopy and give thorough spray coverage. On crops sensitive to copper fungicides use the higher volumes of spray water per acre. When making a concentrate or aerial application without specific experience, it is advisable to test for crop tolerance prior to full scale use.

While volume is important in obtaining full spray coverage, other factors such as foliage density, environmental conditions and spray calibrations, have a greater impact. Always be sure that sprayers are calibrated to spray equipment manufacturer's specifications and environmental conditions are within those required by State and local regulatory authorities.

When using adjuvants or other pesticides in combination with this product, always observe the precautionary statements on the product's label and required days before harvest. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures. Sprays of COPPER HYDROXIDE 30% DF may be applied up to 24 hours preharvest due to REI for Worker Protection Standard. Before mixing with other products in spray tank, be sure that products are compatible. If compatibility is in question, use the compatibility jar test before mixing a whole tank.

COPPER HYDROXIDE 30% DF should not be applied in spray water having a pH of less than 6.5 as phytotoxicity may result. Use a buffering agent to increase the pH to 6.5-7.0 if your water source is below 6.5. Also avoid using water having a pH of greater than 9.0 as effectiveness may be reduced. 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 COPPER HYDROXIDE 30% DF resulting in possible phytotoxicity or loss of effectiveness.

Agricultural chemicals may perform in an unpredictable manner when tank mixed, especially where several products are involved. Reduced effect on pests or crop injury may occur. Unless recommended on this label or by state/local expert, it is advisable to 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.

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

MIXING INSTRUCTIONS FOR SPRAY APPLICATION

Fill the spray tank three-fourths to four-fifths full with clean water. Start agitation (NOTE: Proper agitation creates a rippling or rolling action on the liquid surface). Add COPPER HYDROXIDE 30% DF at the recommended rate.

Mix thoroughly and then add enough water to fill spray tank. Maintain sufficient agitation during mixing and during application of sprays to ensure a uniform spray mixture. When tank mixing with other products, follow the mixing sequence below: (1) micronutrients and fertilizers, (2) wettable powders, dry flowables, and water dispersible granules, (3) liquid flowables, (4) emulsifiable concentrates, and (5) adjuvants. Before adding the second pesticide, be sure that the prior product is well mixed and suspended before adding the next ingredient.

MINIMUM RECOMMENDED SPRAY VOLUME IN GALLONS PER ACRE (GPA)

A full dilute spray on tree crops means the maximum amount of spray when uniformly applied that an acre of such trees will hold to the point that excess spray begins to drip off. Thus the dilute spray volume per acre will depend on tree size and leaf surface per acre. The following listed dilute spray volumes is the volume that will generally provide such coverage on average size of full leafed trees. A concentrate spray is a spray applied in less volumes than a dilute. The extent of the concentration varies by equipment used. Thus the following spray volumes for a concentrated spray are the minimum volumes recommended per acre.

Use COPPER HYDROXIDE 30% DF as noted below unless indicated otherwise in the specific crop directions. COPPER HYDROXIDE 30% DF is adaptable to spraying from aircraft and ground spraying equipment. Depending on the equipment used and the specific crop, the volume applied per acre will differ. Refer to recommended volumes below:

	Aerial (gallons of water/A)	Ground (gallons of water/A)	
		Dilute	Concentrate
Vegetables and Field Crops	3	20	-
Small Fruits	5	150	50
Vines	5	150	50
Fruit and Nut Trees*	10	400	50
Citrus	10	800	100 (20 in Florida)**

*On young fruit trees, use a minimum of 1 gallon spray per acre.
**Pesticide application equipment such as Curtec or other similar sprayers which are capable of obtaining thorough coverage at low volumes may be used at as low as 20 GPA of spray volume.

CHEMIGATION INSTRUCTIONS

Do not apply this product through any irrigation system using aluminum parts or components as damage to the system may occur. Such application is prohibited regardless of whether the irrigation system is flushed with water after use of this product.

Apply this product only through one or more of the following types of systems: sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation system(s) which contain no aluminum parts or components. Do not apply this product through any other type of irrigation system.

Crop injury or lack of effectiveness 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 systems are in place. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

A. Center Pivot, Traveler, Big Gun, Motorized Lateral Move, End Tow, and Side (Wheel) Roll Irrigation Equipment: Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank or injection equipment with water. Operate system for one complete circle for center pivot or one complete run for the other recommended equipment, measuring time required, amount of water injected, and acreage contained in circle or run. Mix recommended amount of product for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run, but continue to operate irrigation system until the product has been cleared from last sprinkler head. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur.

B. Solid Set and Hand Move Irrigation Equipment: Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of product for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that the product will remain in suspension during the injection cycle. Stop injection equipment after treatment is completed and continue to operate irrigation system until pesticide is cleared from last sprinkler head.

SAFETY DEVICES

(1) The systems designated above must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
(2) All pesticide injection pipelines must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
(3) The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
(4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
(5) The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
(6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
(7) Do not apply when wind speed favors drift beyond the area intended for treatment.

SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water systems means a system for the provision to the public of piped water for human consumption if such a 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 a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. 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.

For additional instructions on safety precautions refer to statements (2), (3), (4), (6), and (7) in the section on SAFETY DEVICES.

SPRAY DRIFT
AERIAL APPLICATIONS: • Do not release spray at a height great than 10 ft. above the vegetative canopy of water, unless a greater

application height is necessary for pilot safety.

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1)
- Do not apply when wind speed exceeds 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions

GROUND BOOM APPLICATIONS:

- Apply with the spray release height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a spray release height no more than 4 feet above the ground.
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

CONTROLLING DROPLET SIZE - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure- Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

CONTROLLING DROPLET SIZE - Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT - Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft
Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft. above the crop canopy, unless a greater application height is necessary for pilot safety.

SHIELDED SPRAYERS
Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY
When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS
Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND
Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

RESISTANCE MANAGEMENT

Copper Hydroxide - GROUP M01 FUNGICIDE

COPPER HYDROXIDE 30% DF contains copper hydroxide, a Group M01 fungicide with a multi-site contact activity. Copper hydroxide is an inorganic non-systemic protectant compound which are generally considered as a low-risk of developing resistance.

Because COPPER HYDROXIDE 30% DF is a protective and not systemic fungicide, thorough coverage of the plant surface must be maintained. A gradual or total loss of control may occur over time if plant growth or weathering reduces the foliage coverage.

However, because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies such as:

- Rotate the use of COPPER HYDROXIDE 30% DF or other Group M01 fungicides/bactericides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicide/bactericides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an IPM program for fungicide/bactericide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide/bactericide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal/bacterial populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or 1PM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact your local Albaugh representative at 1-800-

247-8013 or local extension specialist to report resistance.

CROPS

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.

FROST INJURY PROTECTION:

Bacterial Ice nucleation inhibitor - Application of COPPER HYDROXIDE 30% DF 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 thereby provide some protection against light frost. The degree of frost protection will vary with weather conditions and other factors. Not recommended for those geographical areas where weather conditions favor severe frost.

ALFALFA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM RETREATMENT INTERVAL	COMMENT
Cercospora & Leptosphaerulina Leaf Spots	0.75 - 1.5 (0.23 - 0.45 lbs of metallic equivalent)	30 Days	Apply 10 to 14 days before each harvest or earlier if disease threatens. Apply with ground or aerial equipment. Spray injury may occur with sensitive varieties such as Lahontan.
RESTRICTIONS: Maximum single application rate is 1.5 lb/A (0.45 lbs metallic copper equivalent) Maximum annual application rate is 3.7 lb/A (1.11 lbs metallic copper equivalent)			

ALMONDS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Dormant and Late Dormant to Pink Bud Season: Bacterial Blast (Pseudomonas) Coryneum Blight (Shot hole) Bacterial Canker	3.5 – 12.0 (1.05 – 3.6 lbs of metallic equivalent)	7	Make first application before fall rains and a second at late dormant. Use the higher rates when conditions favor disease. If needed, agricultural-type spray oil may be added. Slight leaf injury may occur from post-bloom spray, especially on NePlus varieties.
Bloom/Growing Season: Coryneum Blight (Shothole) Blossom Brown Rot	2.5 – 3.5 (0.75 – 1.05 lbs of metallic equivalent)	5	Use during the early bloom stage (popcorn). To avoid plant injury, do not use after full bloom. Use the higher rates when rainfall is

ALMONDS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
			heavy and disease pressure is high.
Bacterial Blast	0.5 (0.15 lbs of metallic equivalent)	14	For bacterial blast control in sprinkler irrigated orchards or where disease is severe, apply post-bloom at 2 week intervals if needed or just before sprinkling.
RESTRICTIONS Maximum single dormant application rate is 12.0 lbs/A (3.6 lbs. metallic copper equivalent) Maximum single bloom/growing application rate is 3.5 lbs/A (1.05 lbs. metallic copper equivalent) Maximum annual application rate is 60.0 lbs/A (18.0 lbs metallic copper equivalent)			

APPLE			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Fall & Late Dormant: Anthracnose Blossom Blast (Pseudomonas) European Canker Shoot Blast	5.25 - 8.0 (1.575 – 2.4 lbs of metallic equivalent)	Only one dormant application allowed per season	Apply before fall rains. Use on yellow varieties may cause discoloration. To avoid, pick before spraying.
Between silver-tip and green-tip: Apple Scab, Fireblight	3.5 - 8.0 (1.05 – 2.4 lbs of metallic equivalent)	Only one application allowed per season	ATTENTION: Phytotoxicity may occur from late application. (Discontinue use when green-tip is 1/2 inch.)
Bloom & Growing Season: Fireblight	0.5 - 1.0 (0.15 – 0.3 lbs of metallic equivalent)	5	Extended spray schedule where fruit finish is not a concern. Continued applications may be made at 5 – 7 day intervals. NOTE: Crop injury may occur from extended spray schedule. Not intended for fresh market apples due to possible russeting. The addition of 1 – 3 lbs of lime per pound of COPPER HYDROXIDE 30% DF may reduce injury.
Crown or Collar Rot (Phytophthora cactorum)	1.75 (0.525 lbs of metallic equivalent) (See comment)	5	Apply either in early spring or in fall after harvest each year. Do not use if soil pH is below 5.5 or copper toxicity may result. Mix in 100 gallons of water. Apply 1 - 4 gallons of suspension as a drench on the lower trunk area of each tree. Do not exceed the maximum single application rate of 1.75 pounds of product per acre for growing season use.
RESTRICTIONS Maximum single dormant season application rate is 8.0 lbs/A (2.4 lbs. metallic copper equivalent) Maximum single silver-tip to green-tip season application rate is 8.0 lbs/A (2.4 lbs. metallic copper equivalent) Maximum single growing season application rate is 1.75 lbs/A (0.525 lbs. metallic copper equivalent) Maximum annual application rate is 53.3 lbs/A (16 lbs. metallic copper equivalent)			

APRICOTS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Dormant, Late Dormant, Up to Pink Bud: Anthracnose Dead Bud (Pseudomonas syringae) Coryneum Blight European Canker	3.5 – 7.0 (1.05 – 2.1 lbs of metallic equivalent)	Only one dormant application allowed per season	Apply before fall rains. Use the higher rates when conditions favor disease. Use on yellow varieties may cause discoloration. To avoid, pick before spraying.
Bloom, Growing Season: Coryneum Blight (Shot Hole) Blossom Brown Rot	3.5 – 5.0 (1.05 – 1.5 lbs of metallic equivalent)	5	Apply during early bloom. Do not apply after full bloom or injury may occur. Use the higher rates when rainfall is heavy and disease pressure is high.
RESTRICTIONS Maximum single dormant application rate is 7.0 lbs/A (2.1 lbs. metallic copper equivalent) Maximum single bloom/growing application rate is 5.0 lbs/A (1.50 lbs. metallic copper equivalent) Maximum annual application rate is 60.0 lbs/A (18.0 lbs metallic copper equivalent)			

AVOCADOS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose, Blotch, Scab	3.5 – 5.25 (1.05 – 1.575 lbs of metallic equivalent)	14	Apply when bloom buds begin to swell. Continue application at 14 – 28 day intervals for 5 to 6 applications. Use higher rate when conditions favor disease.
RESTRICTIONS Maximum single application rate is 5.25 lbs/A (1.575 lbs metallic copper equivalent) Maximum annual application rate is 63.0 lbs/A (18.9 lbs metallic copper equivalent)			

BANANAS, PLANTAIN			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Sigatoka (black and yellow)	0.75 - 1.75 (0.225 - 0.525 lbs of metallic equivalent)	7	Apply on a 7 - 14 day schedule throughout the wet season. Apply at 14 - 21 day intervals during dry periods. Use higher rates and shorter spray intervals when disease pressure higher.
Black Pitting	1.75 (0.525 lbs of metallic equivalent)	7	Dilute in 50 – 100 gallons of water and apply directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after emergence.
RESTRICTIONS Maximum single application rate is 1.75 lbs/A (0.525 lbs metallic copper equivalent) Maximum annual application rate is 63.0 lbs/A (18.9 lbs metallic copper equivalent)			

BEANS (Dry, Green)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Blight (Halo & Common) Brown spot Downy Mildew	0.5 – 1.5 (0.15 – 0.45 lbs of metallic equivalent)	7	For protective sprays apply first application when plants are five to six inches high. Apply on 7 - 14 day schedule depending on local conditions. Use higher rate for more severe disease pressure.
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.45 lbs. metallic copper equivalent) Maximum annual application rate is 15.8 lbs/A (4.74 lbs metallic copper equivalent)			

BRAMBLES (Aurora, Blackberry, Boysen, Cascades, Chehalems, Dewberry, Logan, Marion, Raspberry, Santiam, & Thornless Evergreens)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose, Leaf & Cane Spot, Purple Blotch, Yellow Rust	1.75 (0.525 lbs of metallic equivalent)	7	Make fall spray application after harvest. Apply delayed dormant spray after pruning/training in spring.
	0.75 (0.225 lbs of metallic equivalent)	7	Apply when leaf buds begin to open and repeat when flower buds show white. NOTE: Crop injury may occur if applied to foliage under hot or moist environmental conditions. Discontinue applications if injury noted.
RESTRICTIONS Maximum single application rate is 1.75/A (0.525 lbs metallic copper equivalent) Maximum annual application rate is 33.3 lbs/A (10.0 lbs metallic copper equivalent)			

BLUEBERRIES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Canker	1.75 – 3.5 (0.525 – 1.05 lbs of metallic equivalent)	7	Make first application before the fall rains, preferably the first week in October and a second application 4 weeks later. Use higher rate when conditions favor disease.
Fruit Rot Phomopsis Twig blight	1.0 – 2.25 (0.30 – 0.675 lbs of metallic equivalent)	7	Dormant application: Begin applications when bloom buds begin to swell. Make additional applications at 7 to 14 day intervals if needed before blooms open.
RESTRICTIONS Maximum single application rate is 3.5 lbs/A (1.05 lbs metallic copper equivalent) Maximum annual application rate is 28.0 lbs/A (8.4 lbs metallic copper equivalent)			

CACAO			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Black Pod	0.75 – 3.75 (0.225 – 1.125 lbs of metallic equivalent)	14	Begin applications at the start of the rainy season and continue while infection conditions persist. Sprays should be made as often as 14 - 21 days in high rainfall areas at varying rates per acre depending on disease severity. For drier areas where 2 to 4 applications are recommended during critical infection periods and at long intervals, use 2.5 – 3.75 lbs per acre, according to disease incidence and planting density.
RESTRICTIONS Maximum single application rate is 3.75 lbs/A (1.125 lbs metallic copper equivalent) Maximum annual application rate is 52.5 lbs/A (15.75 lbs metallic copper equivalent)			

CARAMBOLA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	2.5 – 3.5 (0.75 – 1.05 lbs of metallic equivalent)	7	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.
RESTRICTIONS Maximum single application rate is 3.5 lbs/A (1.05 lbs metallic copper equivalent) Maximum annual application rate is 35.0 lbs/A (10.5 lbs metallic copper equivalent)			

CARROTS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Alternaria Leaf Spot Carrot Blight (Cercospora leaf spot)	0.75 – 1.5 (0.225 – 0.45 lbs of metallic equivalent)	7	Begin application when disease first threatens and repeat at 7 to 14 day intervals as needed depending on disease severity.
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.45 lbs metallic copper equivalent) Maximum annual application rate is 16.7 lbs/A (5.0 lbs metallic copper equivalent)			

CELERY & CELERIAC			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Blight, Cercospora Early Blight, Septoria Late Blight	0.75 – 1.5 (0.225 – 0.45 lbs of metallic equivalent)	7	Apply as soon as plants are first established in the field, then every 7 days or longer depending on severity and weather.
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.45 lbs metallic copper equivalent) Maximum annual application rate is 17.7 lbs/A (5.3 lbs metallic copper equivalent)			

CEREAL GRAINS (Barley, Millet, Oat, Rye, Sorghum, Wheat)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Septoria Leaf Blotch Helminthosporium Spot Blotch	0.5 – 0.75 (0.15 – 0.225 lbs of metallic equivalent)	10	Make first application at early heading and follow with second application 10 days later. Additions of adjuvants is recommended.
RESTRICTIONS Maximum single application rate is 0.75 lb/A (0.225 lbs metallic copper equivalent) Maximum annual application rate is 3.5 lbs/A (1.05 lbs metallic copper equivalent)			

CHERRY			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Dormant, Late Dormant, Up to Pink Bud: Anthracnose Dead Bud (Pseudomonas syringae) Coryneum Blight (Shot Hole) European Canker	3.5 – 7.0 (1.05 – 2.1 lbs of metallic equivalent)	7	Make first application before Fall rains and a second at late dormant. Use the higher rates when conditions favor disease. If needed, agricultural type spray oil may be used. In orchards where the disease is severe a spray should also be applied shortly after harvest.
Bloom & Growing Season: Brown Rot Blossom, Coryneum Blight (Shot Hole) Sour Cherries only: Cherry Leaf Spot	2.5 – 3.5 (0.75 – 1.05 lbs of metallic equivalent)	5	Apply at during early bloom. Do not apply after full bloom or injury may occur. Use higher rates when rainfall is heavy and disease pressure high. Sour Cherries only: At petal fall as well as 1 to 2 times after petal fall.
RESTRICTIONS Maximum single dormant season application rate is 7.0 lbs/A (2.1 lbs metallic copper equivalent) Maximum single growing season application rate is 3.5 lbs/A (1.05 lbs metallic copper equivalent)			

Maximum annual application rate is 60.0 lbs/A (18.0 lbs metallic copper equivalent)

CHIVES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Downy Mildew	0.75 – 1.5 (0.225 – 0.45 lbs of metallic equivalent)	7	Begin applications when plants are established in the field. Repeat applications every 7-10 days as dictated by disease conditions.
RESTRICTIONS Maximum single application rate is 1.5 lb/A (0.45 lbs metallic copper equivalent) Maximum annual application rate is 8.8 lbs/A (2.64 lbs metallic copper equivalent)			

CITRUS (Grapefruit, Kumquat, Lemon, Orange, Pummelo, Tangelo, Tangerine & Lime)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Algal Spot, Melanose, Scab,	1.75 - 6.3 (0.525 – 1.89 lbs of metallic equivalent)	7	Apply as pre-bloom and post-bloom sprays. Use the higher rates when conditions favor disease
Greasy Spot, Pink Pitting	0.75 - 2.5 (0.225 – 0.75 lbs of metallic equivalent	7	Apply in summer on expanded new flush. Repeat on subsequent flushes where disease pressure is severe. Use the higher rates when conditions favor disease.
Alternaria Brown Spot	1.75 - 3.5 (0.525 – 1.05 lbs of metallic equivalent)	7	On susceptible varieties apply when the first spring flush appears 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 if needed. Use the higher rates when conditions favor disease.
Phytophthora Brown Rot, Septoria Spot	1.75 - 6.3 (0.525 – 1.89 lbs of metallic equivalent)	7	Apply beginning in the fall and continuing as needed. For Brown Rot, apply to skirts of trees to a height of at least 4 feet. Apply also to bare ground one foot beyond skirt. For control of Septoria Spot or where fruit have already been infected with Brown Rot, apply to entire tree. Use higher rates when conditions favor disease. NOTE: In California, in areas subject to copper injury, add 1/3 to 1 lb. of high quality lime per lb of COPPER HYDROXIDE 30% DF.
Black Spot* *Not for Use in	1.0 - 3.5 (0.3 – 1.05 lbs of	7	Begin treatment prior to or when disease first appears and repeat every 7 to 21 days if needed. Use higher rates and shorter intervals when

CITRUS (Grapefruit, Kumquat, Lemon, Orange, Pummelo, Tangelo, Tangerine & Lime)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
California	metallic equivalent)		conditions favor disease.
Citrus Canker (SUPPRESSION ONLY)	1. 0 - 2.5 (0.3 - 0.75 lbs of metallic equivalent)	7	Spraying flushes 7 - 14 days after shoots begin to grow. Young fruit may need additional application. Number and timing of applications will depend on disease pressure. Under heavy disease pressure, each flush of new growth should be sprayed.
Phytophthora Foot Rot	0.5 (0.15 lbs of metallic equivalent) (See comment)	(See comment)	Mix with one quart of water, "Tree-Hold" or latex paint. Paint trunks of trees from the soil surface to the lowest scaffold limbs. Apply in May prior to summer rains and/or in the Fall prior to wrapping trees for freeze protection. Treatment serves as protection for up to 1 year but does not cure existing infections. If maximum single application rate is met before application to all trees within the acre, observe the 7 day interval before treating additional trees. Trunk applications are included in the annual maximum application rate.
Field Nursery Grown To control melanose, scab, pink pitting, greasy spot, brown rot and for citrus canker (suppression)	1.75 - 3.5 (0.525 – 1.05 lbs of metallic equivalent)	7	Apply at 7-28 day intervals if needed depending on disease severity.
RESTRICTIONS Maximum single application rate is 6.3 lbs/A (1.89 lbs metallic copper equivalent) Maximum annual application rate is 42.0 lbs/A (12.6 lbs metallic copper equivalent)			

COFFEE			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Coffee Berry Disease (Collectotrichum coffeanum)	2.5 – 3.5 (0.75 – 1.05 lbs of metallic equivalent)	14	Apply after flowering and before the start of long rains and then at 14-28 day intervals until picking. Use the higher rates when rainfall is heavy and disease pressure is high.
Bacterial Blight (Pseudomonas syringae)		14	Begin spray program before the start of long rains and continue until picking. The critical time of spraying to control disease is just before, during, and after flowering(s), especially when these times coincide with wet weather. Use the higher rates when rainfall is heavy and disease pressure is high.
Iron Spot (Cercospora coffeicola) Pink Disease (Corticium salmonicolor)	0.75 (0.25 lbs of metallic equivalent)	14	Use concentrate or dilute spray. Begin treatment at the start of wet season and continue at monthly intervals for three applications.
Leaf Rust	0.75 - 1.75 (0.25 – 0.525 lbs of metallic equivalent)	14	Apply before the onset of rain and then at 14 - 21 day intervals while rains continue. Use the higher rates when rainfall is heavy and disease pressure is high.
RESTRICTIONS Maximum single application rate is 3.5 lbs/A (1.05 lbs metallic copper equivalent) Maximum annual application rate is 42.0 lbs/A (12.6 lbs metallic copper equivalent)			

CORN (FIELD, POP, SEED, SWEET)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Stalk Rot Goss's Wilt (suppression only)*	0.5 - 2.0 (0.15 – 0.6 lbs of metallic equivalent)	7	Begin treatment when disease first appears and repeat every 7 to 10 days as needed. Use the higher rates and shorter spray intervals when conditions favor disease.
RESTRICTIONS Maximum single application rate is 2.0 lbs/A (0.6 lbs metallic copper equivalent) Maximum annual application rate is 14.0 lbs/A (4.2 lb metallic copper equivalent)			

*Not for use in California

CRANBERRY			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Fruit Rot	3.5 (1.05 lbs of metallic equivalent)	7	Make first application in late bloom. Apply one or two additional applications at 7 to 14 day intervals if needed depending on disease severity.
Rose Bloom			Apply three sprays on 7 - 14 day schedule as soon as symptoms are observed.
Bacterial Stem Canker			Apply postharvest and again in spring before bud burst. One or two additional applications at 7 to 14 day intervals may be required depending upon disease severity.
Tip Blight (Monolinia), Stem and Leaf Blight, Red Leaf Spot			Apply delayed dormant spray in the Spring. Repeat at 7 - 14 day intervals as needed through pre-bloom.
RESTRICTIONS Maximum single application rate is 3.5 lbs/A (1.05 lbs metallic copper equivalent) Maximum annual application rate is 42.0 lbs/A (12.6 lb metallic copper equivalent)			

CRUCIFERS (Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Chinese cabbage, Collard Greens, Kale, Kohlrabi, Mustard Greens, & Turnip Greens)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Downy Mildew Black Rot (Xanthomonas) Black Leaf Spot (Alternaria)	0.5 - 0.75 (0.15 - 0.225 lbs of metallic equivalent)	7	Begin application after transplants are set in the field, or shortly after emergence of field seeded crops or when conditions favor disease development. Apply at 7 to 10 day intervals if needed. Use the higher rates when conditions favor disease. NOTE: A slight reddening of older leaves may occur on broccoli, and a slight flecking of wrapper leaves may occur on cabbage.
RESTRICTIONS Maximum single application rate is 0.75 lbs/A (0.225 lbs metallic copper equivalent) Maximum annual application rate is 8.8 lbs/A (2.64 lbs metallic copper equivalent)			

CUCURBITS (Cantaloupes, Casaba, Chayote, Citron melon, Cucumber, Gourd, Honeydews, Muskmelons, Pumpkins, Squash, Watermelons & Waxgourd)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Alternaria Leaf Spot, Angular Leaf Spot, Anthracnose, Downy Mildew, Powdery Mildew, Gummy Stem Blight, Watermelon Bacterial Fruit Blotch (suppression)	0.5 – 1.25 (0.15 – 0.375 lbs of metallic equivalent)	5	Begin application when conditions are favorable for disease development. Repeat at 5-7 day intervals if needed. Use higher rates when conditions favor disease. NOTE: Crop injury may occur from application at higher rates and shorter intervals. Discontinue use if injury occurs.
RESTRICTIONS Maximum single application rate is 1.25 lbs/A (0.375 lb metallic copper equivalent) Maximum annual application rate is 17.5 lbs/A (5.25 lbs metallic copper equivalent)			

CURRANTS & GOOSEBERRY (Ribes)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose, Leaf Spot	4.25 (1.275 lbs of metallic equivalent)	10	Make initial application after first leaves have expanded. Continue on a 10 - 14 day schedule during wet conditions in the Spring. Make an additional application after harvest.
RESTRICTIONS Maximum single application rate is 4.25 lbs/A (1.275 lbs metallic copper equivalent) Maximum annual application rate is 53.3 lbs/A (16.0 lbs metallic copper equivalent)			

DILL			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Phoma Leaf Spot, Rhizoctonia Foliage Blight	0.75 - 1.5 (0.225 - 0.45 lbs of metallic equivalent)	7	Begin applications when plants are first established in the field and repeat at 7-10 day intervals depending upon disease severity and environmental conditions. Use the higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.45 lbs metallic copper equivalent) Maximum annual application rate is 13.16 lbs/A (3.95 lbs. metallic copper equivalent)			

CONIFERS (Douglas Firs, Leyland Cypress, Pine and Spruce, Christmas tree plantings and silviculture nurseries)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Needlecasts, Anthracnose, Phompsis Twig Dieback, Needle Blight,	0.75 - 1.75 (0.225 – 0.525 lbs of metallic equivalent)	7	Begin applications in the spring at the initiation of new growth and repeat at 7 – 28 day intervals. Use higher rates when disease pressure is severe or when conditions favor disease.
Lichens	3.5 (1.05 lbs of metallic equivalent)	see comment	Apply once a year as a dormant application before new growth emerges in the spring. The addition of a non-ionic surfactant will improve control. A second application may be required after 12 months. NOTE: Do not buffer or combine with emulsifiable concentrate insecticides.
RESTRICTIONS Maximum single application rate is 1.75 lbs/A (0.525 lbs metallic copper equivalent) Maximum annual application rate is 66.7 lbs/A (20.0 lbs metallic copper equivalent).			

EGGPLANT			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Alternaria Blight, Anthracnose, Phomopsis,	0.75 - 1.5 (0.225 - 0.45 lbs of metallic equivalent)	7	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals as needed depending on disease severity.
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.45 lbs metallic copper equivalent) Maximum annual application rate is 26.3 lbs/A (7.9 lbs metallic copper equivalent)			

FILBERTS (Permitted only in Washington & Oregon)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Blight (Post Harvest application)	7.0 - 12.0 (2.1 – 3.6 lbs of metallic equivalent)	14	Apply as a post-harvest spray. In seasons of heavy rainfall, apply a second spray when three-quarters of leaves have dropped. Add 1 pint of superior-type oil per 100 gallons of water. Use the higher rates when rainfall is heavy and disease pressure high.
Eastern Filbert Blight			Apply as a dilute spray in adequate water for thorough coverage. Make initial application after harvest in October before heavy winter rains begin. The next application should be made in late February to early March followed by another application 1 month later. If desired, add 1 pint of a sticking agent or superior-type oil per 100 gallons of water. Use the higher rates when rainfall is heavy and disease pressure high.
RESTRICTIONS Maximum single application rate is 12.0 lbs/A (3.6 lbs metallic copper equivalent) Maximum annual application rate is 80.0 lbs/A (24.0 lbs metallic copper equivalent)			

GINSENG			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Alternaria Leaf Blight, Stem Blight	1.0 - 1.75 (0.3 - 0.525 lbs of metallic equivalent)	7	Begin tank mix applications as a tank mix with two pounds of Iprodione 50WP in 100 gallons of water per acre as soon as plants have emerged in spring. Applications should be repeated every seven days until plants become dormant in fall. Apply fungicides at least eight hours before rain, giving the fungicides time to dry on the plants. Use of a spreader-sticker is advised. NOTE: Alternaria Leaf and Stem Blight is most severe in humid conditions such as those found in the dense canopies of two to four year old ginseng. Complete and thorough spray coverage is required for control.
RESTRICTIONS Maximum single application rate is 1.75 lbs/A (0.525 lbs metallic copper equivalent)			

Maximum annual application rate is 17.5 lbs/A (5.25 lbs metallic copper equivalent)

GRAPES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Black Rot, Powdery Mildew, Downy Mildew, Phomopsis	0.75 - 2.0 (0.225 - 0.6 lbs of metallic equivalent)	3	Begin applications at late dormant up to bud break with subsequent applications throughout the season depending upon disease severity. Use the higher rates when conditions favor disease. NOTE: Foliage injury may occur on copper sensitive varieties such as Concord, Delaware, Niagara, and Rosettes. Either test for sensitivity or add 1 to 3 pounds of hydrated lime per pound of Copper Hydroxide 30% DF.
RESTRICTIONS Maximum single application rate is 2.0 lbs/A (0.6 lbs metallic copper equivalent) Maximum annual application rate is 66.7 lbs/A (20.0 lbs metallic copper equivalent)			

GUAVA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose, Red Algae	1.25 – 2.0 (0.375 - 0.6 lbs of metallic equivalent)	7	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use the higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 2.0 lbs/A (0.6 lbs metallic copper equivalent) Maximum annual application rate is 16.4 lbs/A (4.92 lbs metallic copper equivalent)			

HOPS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Downy Mildew	0.75 - 1.5 (0.522 - 0.45 lbs of metallic equivalent)	10	Apply as a crown treatment (after pruning, but before training) as needed. Use the higher rates when conditions favor disease. After training, additional fungicide treatments are needed at 10 day intervals. NOTE: Discontinue use 2 weeks before harvest.
RESTRICTIONS Maximum single application rate is 1.5 lb/A (0.45 lbs metallic copper equivalent) Maximum annual application rate is 8.8 lbs/A (2.65 lbs metallic copper equivalent)			

KIWI			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Pseudomonas syringae, Erwinia herbicola, Pseudomonas fluorescens	2.0 - 4.0 (0.6 - 1.2 lbs of metallic equivalent)	30	Apply in 200 gallons of water per acre. Make applications on a monthly basis. A maximum of 3 applications may be made. Use the higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 4.0 lbs/A (1.2 lbs metallic copper equivalent) Maximum annual application rate is 21.0 lbs/A (6.3 lbs metallic copper equivalent)			

LETTUCE, ENDIVE & ESCAROLE – Not Registered for use in California			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Downy Mildew	0.75 - 1.5 (0.225 – 0.45 lbs of metallic equivalent)	5	Begin treatment when disease first appears and repeat every 5 - 10 days as needed to suppress disease. NOTE: Determine if there is varietal sensitivity prior to use. Injury may occur to sensitive lettuce varieties and under adverse weather conditions. Discontinue use if injury occurs.
NOTE: Flecking and/or yellowing of leaves will occur under certain environmental conditions such as extended periods of moist weather, acid rains, or other conditions favoring reduced pH on leaf surfaces. Injury may be severe enough to reduce crop value. Increasing the volume of spray water may decrease phytotoxicity potential.			
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.45 lb metallic copper equivalent) Maximum annual application rate is 26.6 lbs/A (8.0 lbs metallic copper equivalent)			

LITCHI			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	1.25 - 2.0 (0.375 - 0.6 lbs of metallic equivalent)	7	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use the higher rates for severe disease.
RESTRICTIONS Maximum single application rate is 2.0 lbs/A (0.6 lbs metallic copper equivalent) Maximum annual application rate is 16.4 lbs/A (4.92 lbs metallic copper equivalent)			

LIVE OAK – Not Registered for Use in California			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Ball Moss	2.5 – 3. 5 (0.75 - 1.05 lbs of metallic equivalent)	A second application may be required after 12 months	Apply in 100 gallons of water in the spring when ball moss is actively growing, using 1 ½ gallons of spray per foot of tree height. Make sure to wet ball moss tufts thoroughly. The addition of a non-ionic surfactant will improve control.
RESTRICTIONS Maximum single application rate is 3.5 lbs/A (1.05 lbs metallic copper equivalent) Maximum annual application rate is 66.7 lbs/A (20.0 lbs metallic copper equivalent)			

MACADAMIA NUTS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	2.5 - 4.0 (0.75 - 1.2 lbs of metallic equivalent)	7	Initiate sprays at first sign of flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use higher rates when conditions favor disease.
Phytophthora blight (P. capsici), Raceme blight	1.25 - 2.4 (0.375 – 0.72 lbs of metallic equivalent)	7	Apply during peak raceme development and bloom period. Use higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 4.0 lbs/A (1.2 lbs metallic copper equivalent) Maximum annual application rate is 31.5 lbs/A (9.45 lbs metallic copper equivalent)			

MAMEY SAPOTE			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose, Algal Leaf Spot	2.5 - 3.5 (0.75 – 1.05 lbs of metallic equivalent)	14	Apply when conditions favor disease development. Repeat on 14 - 30 day schedule as disease severity and environmental conditions dictate. Use higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 3.5 lbs/A (1.05 lbs metallic copper equivalent) Maximum annual application rate is 28.0 lbs/A (8.4 lbs metallic copper equivalent)			

MANGO			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	2.0 - 6.0 (0.6 – 1.8 lbs of metallic equivalent)	7	Apply at 7 day intervals after fruit set until harvest. Use the higher rates when rainfall is heavy and disease pressure is high.
RESTRICTIONS Maximum single application rate is 6.0 lbs/A (1.8 lbs metallic copper equivalent) Maximum annual application rate is 160.0 lbs/A (48.0 lbs metallic copper equivalent)			

OKRA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose, Bacterial Leaf Spot, Leaf Spots, Pod Spots, Powdery Mildew	0.75 - 1.75 (0.225 – 0.525 lbs of metallic equivalent)	5	Begin treatment when disease first threatens and repeat every 5 to 10 days or as needed depending on disease severity. Use the higher rates and shorter spray intervals when conditions favor disease.
RESTRICTIONS Maximum single application rate is 1.75 lbs/A (0.525 lbs metallic copper equivalent) Maximum annual application rate is 17.5 lbs/A (5.25 lbs metallic copper equivalent)			

OLIVES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Peacock Spot, Olive Knot	3.5 - 8.0 (1.05 – 2.4 lbs of metallic equivalent)	30	Apply before winter rains fall. A second application in early spring should be made if disease is severe. Use higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 8.0 lbs/A (2.4 lbs metallic copper equivalent) Maximum annual application rate is 60.0 lbs/A (18.0 lbs metallic copper equivalent)			

ONION, GARLIC & LEEK			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Purple Blotch, Downy Mildew, Bacterial Blight	0.75 - 1.5 (0.225 - 0.45 lbs of metallic equivalent)	7	Begin when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals as needed depending upon disease pressure. Can cause phytotoxicity to leaves.
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.45 lb metallic copper equivalent) Maximum annual application rate is 20.0 lbs/A (6.0 lbs metallic copper equivalent)			

PAPAYA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	1.75 - 4.25 (0.525 – 1.275 lbs of metallic equivalent)	7	Apply before disease appears. Apply at 7 day intervals if needed. The addition of an approved spreader is desirable. Use the higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 4.25 lbs/A (1.275 lbs metallic copper equivalent) Maximum annual application rate is 70.7 lbs/A (21.2 lbs metallic copper equivalent)			

PARSLEY			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Blight (Pseudomonas sp.)	1.25 - 2.00 (0.375 - 0.6 lbs of metallic equivalent)	10	Begin applications when plants are first established in the field and repeat at 10 day intervals depending upon disease severity and environmental conditions.
RESTRICTIONS Maximum single application rate is 2.0 lbs/A (0.6 lbs metallic copper equivalent) Maximum annual application rate is 6.66 lbs/A (2.0 lbs metallic copper equivalent)			

PASSION FRUIT			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	2.5 - 4.0 (0.75 - 1.2 lbs of metallic equivalent)	7	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use the higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 4.0 lbs/A (1.2 lbs metallic copper equivalent) Maximum annual application rate is 31.46 lbs/A (9.44 lbs metallic copper equivalent)			

PEACHES & NECTARINES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Dormant, Late Dormant, Up to Pink Bud: Bacterial Blast (Pseudomonas), Bacterial Canker, Bacterial Spot (Xanthomonas), Leaf Curl , Coryneum Blight (Shot Hole)	3.5 - 8.0 (1.05 – 2.4 lbs of metallic equivalent)	1	Make first application before Fall rains and second at late dormant. For peach leaf curl, late dormant application must be made before leaf bud swell. Use the higher rates when rainfall is heavy and conditions favor disease. If needed, agricultural type spray oil may be added.
Blossom Brown Rot, Coryneum Blight (Shot Hole) Leaf Curl	3.5 - 6.0 (1.05 - 1.8 lbs of metallic equivalent)	5	Apply as a full cover spray at pink bud. Use the higher rates when conditions favor disease.
Bloom & Growing Season: Bacterial Spot	0.25 - 0.5 (0.075 – 0.15 lbs of metallic equivalent)	5	Apply as a post bloom cover spray. Repeat at 5 day intervals if needed. Do not make more than 6 applications. Note: spotting of leaves and defoliation may occur from use in cover sprays. Discontinue use if injury occurs.
RESTRICTIONS Maximum single dormant season application rate is 8.0 lbs/A (2.4 lbs metallic copper equivalent) Maximum single growing season application rate is 0.5 lbs/A (0.075 lbs metallic copper equivalent) Maximum annual application rate is 60.0 lbs/A (18.0 metallic copper equivalent)			

PEANUTS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Cercospora Leaf Spot	0.75 - 1.25 (0.225 - 0.375 lbs of metallic equivalent)	7	Begin spraying at 35 to 40 days after planting or when disease symptoms first appear an repeat at 7 to 14 day intervals if needed. Reduce sprays to 7 day intervals during humid weather. Use the higher rates when conditions favor disease. Flowable sulfur may be added.
RESTRICTIONS Maximum single application rate is 1.25 lbs/A (0.375 lbs metallic copper equivalent) Maximum annual application rate is 15.8 lbs/A (4.74 metallic copper equivalent)			

PEARS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Fall & Late Dormant: Blossom Blast (Pseudomonas)	5.25 - 8.0 (1.575 – 2.4 lbs of metallic equivalent)	N/A	Apply before fall rains and again during dormancy before spring growth starts. Use the higher rates when disease pressure is high or conditions favor disease development.
Bloom & Growing Season: Fireblight	0.5 (0.15 lbs of metallic equivalent)	5	Extended spray schedule throughout the bloom period where fruit finish is not a concern. Continued applications may be made at 5 – 7 day intervals. NOTE: Crop injury may occur from extended spray schedule. Not intended for fresh market apples due to possible russeting. The addition of 1 – 3 lbs of lime per pound of COPPER HYDROXIDE 30% DF may reduce injury.
RESTRICTIONS Maximum single dormant season application rate is 8.0 lbs/A (2.4 lbs. metallic copper equivalent) Maximum single growing season application rate is 0.5 lbs/A (0.15 lbs. metallic copper equivalent) Maximum annual application rate is 53.3 lbs/A (16 lbs. metallic copper equivalent)			

PEAS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Powdery Mildew	0.5 - 1.25 (0.15 - 0.375 lbs of metallic equivalent)	7	Begin spray treatment when disease symptoms first appear. Repeat applications at weekly intervals. Use the higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 1.25 lbs/A (0.375 lbs metallic copper equivalent) Maximum annual application rate is 13.16 lbs/A (3.95 lbs metallic copper equivalent)			

PECANS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Shuck and Kernel rot (Phytophthora cactorum) Zonate leaf spot (Cristulariella pyramidalis)	0.75 - 1.75 (0.225 – 0.525 lbs of metallic equivalent)	14	For suppression, apply in sufficient water for good coverage at 2-4 week intervals starting at kernel growth and continuing until shucks open. Use the higher rate and shorter intervals if frequent rainfall occurs.
Mosses (Ball & Spanish) Algae Lichen	See Comment	Make only one application per year	Mix 1 - 2 lbs per 100 gallons spray plus spreader-sticker on a dilute spray basis and apply in dormant season before buds swell, thoroughly wetting limbs and mosses.
RESTRICTIONS Maximum single application rate is 1.75 lbs/A (0.525 lbs metallic copper equivalent) Maximum annual application rate is 21.0 lbs/A (6.3 lbs metallic copper equivalent)			

PEPPERS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Spot	0.75 - 1.25 (0.225 - 0.375 lbs of metallic equivalent)	3	Apply, when disease threatens, in sufficient water to provide adequate coverage. Use at 3 to 10 day intervals depending on disease severity. Use the higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 1.25 lbs/A (0.375 lbs metallic copper equivalent) Maximum annual application rate is 39.5 lbs/A (11.85 lbs metallic copper equivalent)			

PISTACHIOS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Botrytis Blight, Botryosphaeria Panicle, Shoot Blight, Septoria Leaf Blight, Late Blight (Alternaria)	1.75 - 4.0 (0.525 - 1.2 lbs of metallic equivalent)	14	Make initial application at bud swell and repeat on a 14 - 28 day schedule. Use higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 4.0 lbs/A (1.2 lbs metallic copper equivalent) Maximum annual application rate is 28.0 lbs/A (8.4 lbs metallic copper equivalent)			

PLUMS & PRUNES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Dormant, Late Dormant, Up to Pink Bud: Coryneum blight (Shot hole), Bacterial Canker, Bacterial Blast (Pseudomonas)	3.5 - 7.0 (1.05 – 2.1 lbs of metallic equivalent)	7	Apply as a dormant spray. Use the higher rate when rainfall is heavy and/or disease pressure is high.
Bloom & Growing Season: Blossom Brown Rot, Black Knot	1.75 - 3.5 (0.525 - 1.05 lbs of metallic equivalent)	5	Make an application at bud swell up to early bloom for early season disease suppression. Apply before full bloom. Use the higher rates when rainfall is heavy and disease pressure is high. NOTE: To avoid plant injury, do not use after full bloom.
RESTRICTIONS Maximum single dormant season application rate is 7.0 lbs/A (2.1 lbs metallic copper equivalent) Maximum single growing season application rate is 3.5 lbs/A (1.05 lbs metallic copper equivalent) Maximum annual application rate is 60.0 lbs/A (18.0 lbs metallic copper equivalent)			

POTATOES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Early & Late Blight	0.5 - 2.5 (0.15 – 0.75 lbs of metallic equivalent)	5	Apply at 5 to 10 day intervals if needed starting when plants are 2 to 6 inches high in locations where disease is light. Apply up to 1.75 pounds per acre when disease is more severe. Under conditions of severe disease, control with COPPER HYDROXIDE 30% DF will be improved by tank mixing with other compatible fungicides registered for use on potatoes. Read and follow all label instructions of tank mix partners.
RESTRICTIONS Maximum single application rate is 2.5 lbs/A (0.75 lbs metallic copper equivalent) Maximum annual application rate is 83.3 lbs/A (25.0 lbs metallic copper equivalent)			

STRAWBERRIES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Angular Leaf Spot, Leaf Blight, Leaf Scorch, Leaf Sot	0.75 - 1.5 (0.225 – 0.45 lbs of metallic equivalent)	7	Begin application when plants are established and continue on a weekly schedule throughout season. Apply in at least 20 gallons of water. Use the higher rates when conditions favor disease. NOTE: Discontinue applications if signs of phytotoxicity appear.
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.45 lbs metallic copper equivalent) Maximum annual application rate is 20.0 lbs/A (6.0 lbs metallic copper equivalent)			

SUGAR APPLE (Annona) & ATEMOYA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	1.25 - 2.0 (0.375 - 0.6 lbs of metallic equivalent)	7	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use the higher rates for severe disease.
RESTRICTIONS Maximum single application rate is 2.0 lbs/A (0.6 lbs metallic copper equivalent) Maximum annual application rate is 42.0 lbs/A (12.6 lbs metallic copper equivalent)			

SOYBEAN - Not Registered for Use in California			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Blight, Downy Mildew	0.75 - 1.5 (0.225 - 0.45 lbs of metallic equivalent)	7	For protective sprays, make first application when plants are 6 inches high, repeat on a 7 to 14 day schedule if needed depending on environmental conditions. Use the higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.45 lbs metallic copper equivalent) Maximum annual application rate is 15.8 lbs/A (4.74 lbs metallic copper equivalent)			

SUGAR BEETS & TABLE BEETS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Cercospora Leaf Spot	0.75 - 2.0 (0.225 - 0.6 lbs of metallic equivalent)	10	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals as needed. Use the higher rates when conditions favor disease. Addition of adjuvants are recommended.
RESTRICTIONS Maximum single application rate is 2.0 lbs/A (0.6 lbs metallic copper equivalent) Maximum annual application rate is 26.2 lbs/A (7.86 lbs metallic copper equivalent)			

SYCAMORE			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	0.75 - 1.25 (0.225 – 0.375 lbs of metallic equivalent)	7	Apply as a full cover spray in 100 gallons of water or sufficient volume for thorough coverage. Make first application at bud crack and second application 7 to 10 days later at 10% leaf expansion. Use the higher rates when conditions favor disease.
RESTRICTIONS Maximum single application rate is 1.25 lbs/A (0.375 lbs metallic copper equivalent) Maximum annual application rate is 66.7 lbs/A (20.0 lbs metallic copper equivalent)			

TOMATOES (Processing Market)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Early Blight, Bacterial Speck, Bacterial Spot, Anthracnose, Gray Leaf Mold, Gray Leaf Spot, Septoria Leaf Spot, Late Blight	0.75 - 1.75 (0.225 - 0.525 lbs of metallic equivalent)	3	When disease threatens, apply at 3 - 10 day intervals, more frequently when disease is severe.
RESTRICTIONS Maximum single application rate is 1.75 lbs/A (0.525 lbs metallic copper equivalent) Maximum annual application rate is 58.0 lbs/A (17.4 lbs metallic copper equivalent)			

TOMATOES (Fresh Market)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Early Blight, Bacterial Speck, Bacterial Spot, Anthracnose, Gray Leaf Mold, Gray Leaf Spot, Septoria Leaf Spot, Late Blight	0.75 - 1.75 (0.225 - 0.525 lbs of metallic equivalent)	3	When disease threatens, apply at 3 - 10 day intervals, more frequently when disease is severe.
RESTRICTIONS Maximum single application rate is 1.75 lbs/A (0.525 lbs metallic copper equivalent) Maximum annual application rate is 26.7 lbs/A (8.0 lbs metallic copper equivalent)			

WALNUTS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Walnut Blight	3.5 - 8.0 (1.05 – 2.4 lbs of metallic equivalent)	7	Apply first spray at early pre-bloom when catkins are partially expanded. Make three additional applications during bloom and early nutlet stages at 7 to 10 day intervals. Additional applications may be necessary when frequent rainfall occurs. Thorough coverage of catkins, leaves and nutlets is essential for effective control. When applied as a dilute spray, 1 pint of summer oil emulsion may be added per 100 gallons of spray. NOTE: Adequate control may not be obtained when copper tolerant species of Xanthamonas bacteria are present.
RESTRICTIONS Maximum single application rate is 8.0 lbs/A (2.4 lbs metallic copper equivalent) Maximum annual application rate is 106.6 lbs/A (32.0 lbs metallic copper equivalent)			

WATERCRESS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Cercospora Leaf Spot	0.75 - 1.5 (0.225 - 0.45 lbs of metallic equivalent)	7	Begin application when plants are first established in the field, repeating at 7 - 14 day intervals depending on disease severity and environmental conditions. Do not exceed 4 applications per year. Apply using ground spray equipment at no less than 50 gallons of spray solution per acre.
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.45 lbs metallic copper equivalent) Maximum annual application rate is 7.0 lbs/A (2.12 lbs metallic copper equivalent) Production fields must be drained of water at least 24 hours prior to each application and water must not be reapplied to the field for a minimum of 24 hours following each application. Copper must not be applied to watercress during the aquatic production phase.			

GREENHOUSE AND SHADEHOUSE CROPS

NOTICE TO USER: COPPER HYDROXIDE 30% DF may be used in greenhouses and shadehouses 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 shadehouses differ greatly from crops grown under field conditions. Neither the manufacturer nor seller has determined whether or not COPPER HYDROXIDE 30% DF can be used safely prior to commercial use. In a small area, apply the labelled rates to the plant in question, i.e. foliage, fruit, etc. and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use.

Apply COPPER HYDROXIDE 30% DF according to specific rates given for these crops in pounds per acre or pounds per 100 gallons.

COPPER HYDROXIDE 30% DF 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.

The Re-entry Interval (REI) for Greenhouse use is 24 hours. Refer to the Agricultural Use Requirements section for notification and PPE requirements for greenhouse use.

CROP	DISEASE	RATE per 1,000 sq.ft.	COMMENTS
Eggplant	Alternaria Blight, Anthracnose, Phomopsis	½ TBSP	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals as needed depending on disease pressure.
Pepper	Bacterial Spot	½ to 1 ½ TBSP	Begin applications when conditions first favor disease development and repeat at 5 to 10 day intervals as needed depending on disease severity. Use higher rates for severe

CROP	DISEASE	RATE per 1,000 sq.ft.	COMMENTS
			disease.
Cucumber	Angular Leaf Spot, Downy Mildew	½ to 1 ½ TBSP	Apply weekly when plants begin to vine.
Tomato	Early Blight, Late Blight	½ to 1 ½ TBSP	Begin when disease first threatens and repeat at 3 to 10 day intervals or as needed depending on disease severity. Use higher rate for severe disease.
	Bacterial Speck	½ to 1 ½ TBSP	Begin applications when disease first threatens and repeat at 3 to 10 day intervals or as needed depending on disease severity.
	Bacterial Spot, Anthracnose, Gray Leaf Mold, Septoria Leaf Spot	½ to 1 ½ TBSP	Begin when disease first threatens and repeat at 3 to 10 day intervals or as needed depending on disease severity. Use higher rate for severe disease.

NOTICE: To the extent consistent with applicable law, Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on this label when used in accordance with directions under normal conditions of use; but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to label instructions not reasonably foreseeable to seller; the buyer assumes the risk of any such use.

071922

LABEL HISTORY

Not included in final printed label

File Name	Version Mark	Comment
42750-281.20220719.DRAFT	071922	Reg Review - Response to EPA commments