COPPER	GROUP	M01	FUNGICIDE

KOCIDE® 50 DF

FOR USE IN: LISTED CITRUS, LISTED VEGETABLES, LISTED TREE CROPS, LISTED SMALL FRUITS, LISTED VINES, LISTED FIELD CROPS, LISTED GREENHOUSES, LISTED TURF AND ORNAMENTALS

Ingredient: Active

Copper Hydroxide*†	76.8%
Other Ingredients	23.2%
TOTAL:	100.0%

*Metallic Copper (Cu^{2+}) Equivalent. 50.0% by weight †CAS No. 20427-59-2

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.)

MANUFACTURED FOR:
Certis USA LLC
9145 Guilford Road, Suite 175
Columbia, MD 21046

PRODUCED BY:

ESL20231229
Ver:20240118

EPA Reg. No. 64744-5-70051
EPA Est. No. 91411-TX-1
Net Contents:

This is a Specimen Label. It may not reflect the most-recent approved label for use in your state. Always refer to the label on the product packaging for approved use instructions. Please contact your Certis sales representative for more information.

FIRST AID	
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 Swallowed:	• Call 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 by mouth to an unconscious person.
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.
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 treatment advice.
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 CHEMTEL (800) 255-3924 (24 hours) for emergency medical treatment information.**	
Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.	
See side/back panels for additional precautionary statements.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER-PELIGRO

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Do not get in eyes, on skin or clothing. Avoid contact with skin. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators and other handlers must wear:

- Long–sleeved shirt
- Long pants
- Shoes and socks
- Chemical resistant gloves made of any waterproof material including Barrier Laminate, Butyl Rubber ≥14 mils, Nitrile Rubber ≥14 mils, Neoprene Rubber ≥14 mils, Natural Rubber ≥14 mils, Polyethylene Polyvinyl Chloride (PVC) ≥14 mils, or Viton ≥14 mils
- Protective eyewear

Remove and wash contaminated clothing before reuse.

See engineering controls for additional requirements. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

ENGINEERING CONTROLS

Pilots must use an enclosed cab that meets the definition listed in the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.305].

When handlers use enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR Part 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.
- 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.

ENVIRONMENTAL HAZARDS

Fish Advisory Statement: This copper product is toxic to fish and aquatic organisms and may contaminate water through runoff. Unlike most organic pesticides, copper is an element and will not break down in the environment and will therefore accumulate in sediment with repeated applications. Copper is a micronutrient, but its pesticidal application rate exceeds the amount of copper needed as a nutrient.

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. For requirements specific to your State or Tribe, consult the State or Tribe agency responsible for pesticide regulations.

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, greenhouses, and handlers of agricultural insecticides. 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 without required PPE.

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, including plants, soil or water is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material including Barrier Laminate, Butyl Rubber ≥14 mils, Nitrile Rubber ≥14 mils, Neoprene Rubber ≥14 mils, Natural Rubber ≥14 mils, Polyethylene Polyvinyl Chloride (PVC) ≥14 mils, or Viton ≥14 mils
- Shoes plus socks
- Protective eyewear

For Greenhouse Uses ONLY:
The 48 hour restricted-entry interval (REI) may be reduced to 24 hours, provided that the following conditions are met:
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 condition with the WPS-required decontamination supplies for workers entering the area treated with copper-containing products.
- Workers are informed orally, in a manner they can understand:
  - that residues in the treated area may be highly irritating to their eyes,
  - that they should take precautions, including refraining from rubbing their eyes, to keep the residues out of their eyes,
  - that if they do get residues in their eyes, they should immediately flush their eyes with the eye flush container or eye flush station that is located with the decontamination supplies, and
  - how to 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.

PRODUCT INSTRUCTIONS

Kocide® 50DF may be applied as an aerial, ground dilute or ground concentrate spray unless specifically directed otherwise in the specific crop use directions.

The per acre use rate of Kocide® 50DF is applicable for both dilute and concentrate spraying. Depending upon the equipment used and the specific crop, the spray volume applied per acre will differ. Refer to Minimum Spray Volume Table. Complete spray coverage is essential to assure optimum performance from Kocide® 50DF. When treating by aerial application or with low volume application equipment, unless you have had specific previous experience, it is advisable to test for compatibility and tolerance to crop injury prior to full scale commercial utilization.

Consult the Kocide® 50DF label for specific rates and timing of application by crop. Where application rates and intervals are provided in a range (e.g., 4 to 12 pounds and 7 to 10 days), use the higher rates and shorter spray intervals when rainfall is heavy and/or disease pressure is high. Use the higher rates for large mature tree crops.

The Pre-Harvest Interval (PHI) for Kocide® 50DF is 0-days unless noted.

RESTRICTIONS:

- Do not tank mix Kocide® 50DF with any product containing aluminum tris (O-ethyl phosphonate) fungicide for use on any registered crops unless appropriate precautions have been taken to buffer the spray solution because severe phytotoxicity may result.
- Use in accordance with the most restrictive of label limitations and precautions. Do not exceed label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing.
- This product may be reactive on masonry and metal surfaces including galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.
- Not for residential use.
- Pilots must use an enclosed cab that meets the definition listed in the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.305].

SPECIAL PRECAUTIONS:

- If Kocide® 50DF is applied in a spray solution having a pH of less than 6.5, phytotoxicity may occur.
- Environmental conditions including extended periods of wet weather, acid rain, etc. which alter the pH of the leaf surface may affect the performance of Kocide® 50DF 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 specified on this label or by a State/local expert, it is advisable to test for compatibility and potential crop injury prior to commercial use of a new tank mix.
- It must be determined if proper application equipment is available and if waste associated with its use can be properly handled. Agricultural chemicals are often reactive with the materials used in the construction of application equipment, including aluminum, rubber, and some synthetic materials. This factor must be taken into consideration when selecting proper

application equipment. It is necessary that all application equipment be thoroughly flushed with clean water after each day's use.

- Apply this product only through one or more of the following types of systems: sprinkler, including center pivot, lateral move, traveler, big gun, or plastic pipe solid set systems. Do not apply this product through any other type of irrigation system. In California, do not apply in systems which contain aluminum parts or components.
- While volume is important in obtaining full spray coverage, often factors such as foliage density, environmental conditions and sprayer calibration 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.
- When mixing, fill the spray tank one-half full with water. Add Kocide® 50DF slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Spreaders, stickers, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank or contact your chemical supplier. Observe all precautions and limitations on the labels of all products used in mixtures.
- It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

RESISTANCE MANAGEMENT

COPPER	GROUP	M01	FUNGICIDE

For resistance management, Kocide® 50DF contains a Group M01 fungicide. Any fungal population may contain individuals naturally resistant to Kocide® 50DF and other Group M01 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance management strategies should be followed. To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of Kocide® 50DF or other Group M01 fungicides within a growing year sequence with different groups that control the same pathogens.
- Avoiding the consecutive use of Kocide® 50DF or other target site of action Group M01 fungicides/bactericides that might have a similar target site of action, on the same fungal pathogen species.
- Use tank mixtures with fungicides 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 integrated disease management program for fungicide 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 applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance management and/or IPM specifications for specific crops and pathogens.
- For further information or to report suspected resistance contact your local Certis USA LLC representative. You can also contact your pesticide distributor or university extension specialist to report resistance.

SPRAY DRIFT

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.

Aerial Applications:

- Do not release spray at a height greater than 10 ft. above the vegetative canopy or 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 winds speed 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.
- Applicators must use ½ swath displacement upwind at the downwind edge of the application area.
- Do not apply during temperature inversions.

Ground Boom Applications:

- Apply with the spray release height specified by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 mph 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 specified 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' specifications for setting up nozzles. Generally, to reduce fine droplets, nozzles must 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 must 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.

Other State and Local Requirements

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

CHEMIGATION INSTRUCTIONS

Do not apply this product through any irrigation (chemigation) 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, traveler, big gun, or plastic pipe solid set system(s) which contain no aluminum parts or components. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, 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.

Shut off injection equipment after treatment and continue to operate irrigation system until Kocide® 50DF has been cleared from the last sprinkler head.

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

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive area. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other locations 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 1/2 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.

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.

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.

Systems must use a metering pump, including a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

IMPORTANT: It must be determined if proper application equipment is available and if waste associated with its use can be properly handled. Agricultural chemicals are often reactive with the materials used in the construction of application equipment, including aluminum, rubber and some synthetic materials. This factor should be taken into consideration when selecting proper application equipment. It is necessary that all application equipment be thoroughly flushed with clean water after each day's use.

When mixing, fill the nurse tank half full with water. Add Kocide® 50DF 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 the Compatibility Jar Test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all precautions and limitations on the labels of all products used in mixtures. Agitate the mixture in the nurse tank.

Kocide® 50DF should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Shut off injection equipment after treatment and continue to operate irrigation system until Kocide® 50DF has been cleared from the last sprinkler head.

SPRINKLER CHEMIGATION

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

The pesticide injection pipeline must also 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 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, including a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

NOTE: It must be determined if proper application equipment is available and if waste associated with its use can be properly handled. Agricultural chemicals are often reactive with the materials used in the construction of application equipment, including aluminum, rubber and some synthetic materials. This factor should be taken into consideration when selecting proper application equipment. It is necessary that all application equipment be thoroughly flushed with clean water after each day's use. When mixing, fill the nurse tank half full with water. Add Kocide® 50DF 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 the Compatibility Jar Test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all precautions and limitations on the labels of all products used in mixtures.

Agitate the mixture in the nurse tank.

Kocide® 50DF should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Shut off injection equipment after treatment and continue to operate irrigation system until Kocide® 50DF has been cleared from the last sprinkler head.

APPLICATION INSTRUCTIONS

Minimum Spray Volume (Gallons Per Acre) When Applying Kocide® 50DF

	Aerial	Ground	
		Dilute	Concentrate
Citrus	10	800	100**
Conifers	10	100	30
Field Crops	3	20	3
Ornamentals	10	100	50
Small Fruits	5	150	50
Tree Crops	10	400	50
Vegetables	3	20	3
Vines	5	150	50
Miscellaneous	10	150	50

**Pesticide application equipment including "Curtec" or other similar sprayers which are capable of obtaining thorough coverage at low volumes may be used at as low as 20 gallons per acre of spray volume.
The specifications of State Agricultural Extension Services should be closely followed as to timing, frequency, and number of sprays per year.

FROST INJURY PROTECTION
BACTERIAL ICE NUCLEATION INHIBITOR

Application of Kocide® 50DF 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. Do not use Kocide® 50DF for those geographical areas where weather conditions favor severe frost.

CITRUS			
Grapefruit, Kumquat, Lemon, Lime, Orange, Pummelo, Tangelo and Tangerine			
Kocide® 50DF 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. Kocide® 50DF per acre rates in these mixes must not exceed the maximum labeled rates for disease control. Adding foliar nutritionals or other products to spray mixtures containing Kocide® 50DF and applying to citrus during the post-bloom period when young fruit are present may result in spray burn.			
Disease	**Application Rate/Acre**	**Maximum Annual Rate/Acre**	**Use Instructions**
Algal Spot	3 – 6.3 lbs. *(1.5-3.15 lbs. metallic copper)*	25.1 lbs. *(12.6 lbs. metallic copper)*	Apply as pre-bloom and post-bloom sprays. Use the higher rates when conditions favor disease. Minimum retreatment interval is 7 days.
Melanose, Scab	2 – 6.3 lbs. *(1-3.15 lbs. metallic copper)*		Apply as pre-bloom and post-bloom sprays. Use the higher rates when conditions favor disease. Minimum retreatment interval is 7 days.
Greasy Spot, Pink Pitting	2 – 6.3 lbs. *(1-3.15 lbs. metallic copper)*		Apply in summer on expanded new flush. Repeat on subsequent flushes where disease pressure is severe. Use the higher rates when conditions favor disease. Minimum retreatment interval is 7 days.
Alternaria Brown Spot	4 – 6.3 lbs. *(2-3.15 lbs. metallic copper)*		On susceptible varieties apply when the first spring flush appears and each flush thereafter. Application to fruit must 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. Minimum retreatment interval is 7 days.
Phyophthora,			Begin application in fall before or just after the first rain and continue if needed. Use the higher rates when conditions favor disease. Minimum retreatment interval is 7 days. **IMPORTANT:** In California, in areas subject to copper injury, add 0.25 to 0.5 pound of high-quality lime per pound of Kocide® 50DF.
Brown rot, Septoria Spot	2 – 6.3 lbs. *(1-3.15 lbs. metallic copper)*		Begin application in fall before or just after the first rain and continue if needed. For Brown Rot only, apply to skirts of trees to a height of at least 4 feet. For control of Septoria Spot or where fruit have already been infected with Brown Rot, apply to entire tree. Apply also to bare ground one foot beyond skirt. Use the higher rates when conditions favor disease. Minimum retreatment interval is 7 days. **IMPORTANT:** In California, in areas subject to

			copper injury, add 0.25 to 0.5 pound of high-quality lime per pound of Kocide® 50DF.
Phytophthora Foot Rot	1 lbs. *(0.5 lbs. metallic copper)*		Mix at a 1 pound to 0.5 to 1 gallon of water ratio, "Tre-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. **IMPORTANT:** Areas where microjet or low volume irrigation hit the tree trunk may require retreatment due to wash off.
Citrus Canker (suppression)	6.3 lbs. *(3.15 lbs. metallic copper)*		Spray 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, spray each flush of new growth. Minimum retreatment interval is 7 days.
Black Spot*	3.5 – 6.3 lbs. *(1.75-3.15 lbs. metallic copper)*		Begin treatment prior to or when disease first appears and repeat every 7 to 21 days if needed. Use the higher rates and shorter spray intervals when conditions favor disease. Minimum retreatment interval is 7 days.

NOTE: Phytotoxicity may occur on young tender flush when Kocide® 50DF is applied to citrus seedlings grown in greenhouses or shadehouses.

Restriction:
- Maximum single application is 6.3 lbs./A (3.15 lbs. metallic copper equivalent).
- Do not make more than 4 applications per year at the maximum single application rate.
- Minimum retreatment interval is 7 days.

*Not registered for use in California.

CITRUS
Field Nursery Grown

Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions
Melanose Scab Pink Pitting Greasy Spot Brown Rot Citrus Canker (suppression)	6.3 lbs. *(3.15 lbs. metallic copper)*	25.1 lbs. *(12.6 lbs. metallic copper)*	Apply Kocide® 50DF at 28-day intervals if needed depending on disease severity.

Restriction:
- Maximum single application is 6.3 lbs./A (3.15 lbs. metallic copper equivalent).
- Do not make more than 4 applications per year at the maximum single application rate.
- Minimum retreatment interval is 7 days.

FIELD CROPS				
Crop	**Disease**	**Application Rate/Acre**	**Maximum Annual Rate/Acre**	**Use Instructions**
Alfalfa	Cercospora Leaf Spot, Leptosphaerulina Leaf Spot	1 lbs. *(0.5 lbs. metallic copper)*	2 lbs. *(1.0 lbs. metallic copper)*	Apply 10 to 14 days before each harvest or earlier if disease threatens. Minimum retreatment interval is 30 days. **IMPORTANT:** Spray injury may occur with sensitive varieties including Lahontan.
Restrictions: • Maximum single application rate is 1.0 lbs./A (0.5 lbs. metallic copper equivalent). • Minimum retreatment interval is 30 days. • Do not apply within 9 days of harvest. • Do not make more than 2 applications per year.				
Corn (Field Corn, Popcorn, Seed Corn, Sweet Corn)	Bacterial Stalk Rot, Gross' wilt	1 – 2.1 lbs. *(0.5-1.05 lbs. metallic copper)*	8.4 lbs. *(4.2 lbs. metallic copper)*	Begin treatment when disease first appears and repeat every 7-to 10-days if needed. Use the higher rates and shorter spray intervals when conditions favor disease.
Restrictions: • Maximum single application rate is 2.1 lbs./A (1.05 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not make more than 4 applications per year at the maximum single application rate.				
Peanut	Cercospora Leaf Spot	1.5 lbs. *(0.75 lbs. metallic copper)*	9 lbs. *(4.5 lbs. metallic copper)*	Begin spraying at 35 to 40 days after planting or when disease symptoms first appear and repeat at 7- to 14-day intervals if needed. Reduce sprays to 7-day intervals during humid weather. Flowable sulfur may be added.
Restrictions: • Maximum single application rate is 1.5 lbs./A (0.75 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not make more than 6 applications per year.				

Potato	Early Blight, Late Blight	1 – 4 lbs. *(0.5-2 lbs. metallic copper)*	50 lbs. *(25 lbs. metallic copper)*	Apply 1 to 2 pounds 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 4 pounds per acre when disease is more severe. Under conditions of severe disease, control with Kocide® 50DF 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.
Restriction: • Minimum retreatment interval is 5 days. • Maximum single application rate is 4.0 lbs./A (2.0 lbs. metallic copper equivalent). • Do not make more than 12 applications per year at the maximum single application rate.				
Sugar Beet	Cercospora Leaf Spot	2 – 2.6 lbs. *(1-1.3 lbs. metallic copper)*	15.6 lbs. *(7.8 lbs. metallic copper)*	Begin applications when conditions first favor disease development and repeat at 10- to 14-day intervals if needed. Use the higher rates when conditions favor disease.
Restrictions: • Maximum single application rate is 2.6 lbs./A (1.3 lbs. metallic copper equivalent). • Minimum retreatment interval is 10 days. • Do not make more than 6 applications per year at the maximum single application rate.				
Wheat, Barley, Oats	Fusarium Head Blight Suppression*, Helminthosporium Spot Blotch, Powdery Mildew Suppression, Stagonospora Leaf and Glume Blotch, Stem Rust*	1 lbs. *(0.5 lbs. metallic copper)*	2 lbs. *(1 lbs. metallic copper)*	Make applications for early season disease control through heading. Use higher rates when conditions favor disease. Add an adjuvant.
Restrictions: • Maximum single application rate is 1.0 lbs./A (0.5 lbs. metallic copper equivalent). • Minimum retreatment interval is 10 days. • Do not make more than 2 applications per year.				
*Not registered for use in California.				

SMALL FRUITS *Blackberry, Blueberry, Cranberry, Currant, Gooseberry, Raspberry and Strawberry*				
Crop	**Disease**	**Application Rate/Acre**	**Maximum Annual Rate/Acre**	**Use Instructions**
Blackberry (Aurora, Boysen, Cascade, Chehalem, Logan, Marion, Santiam, Thornless Evergreen)	Anthracnose, Cane Spot, Leaf Spot, Pseudomonas Blight, Purple Blotch, Yellow Rust	4 lbs. *(2 lbs. metallic copper)*	20 lbs. *(10 lbs. metallic copper)*	Make fall application after harvest. Apply delayed dormant spray after pruning/training in the spring. If needed, agricultural-type spray oil may be added.
	Anthracnose, Cane Spot, Leaf Spot, Purple Blotch, Yellow Rust	2 lbs. *(1 lbs. metallic copper)*		Apply when leaf buds begin to open and repeat when flower buds show white. Repeat on a 7-day interval if needed. If needed, agricultural-type spray oil may be added. **IMPORTANT:** Crop injury may occur if applied to foliage under certain environmental conditions including hot or prolonged moist periods. Discontinue applications if signs of crop injury appear.
Restrictions: • Maximum single application rate is 4.0 lbs./A (2.0 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not make more than 5 applications per year at the maximum single application rate.				
Blueberry	Bacterial Canker	3 – 4 lbs. *(1.5-2 lbs. metallic copper)*	16.8 lbs. *(8.4 lbs. metallic copper)*	Make first application before fall rains and a second application 4 weeks later. Use the higher rates when conditions favor disease.
	Fruit Rot, Phomopsis Twig Blight	3 – 4.2 lbs. *(1.5-2.1 lbs. metallic copper)*		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 4.2 lbs./A (2.1 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not make more than 4 applications per year at the maximum single application rate.				
Cranberry	Fruit Rot	4.2 lbs. *(2.1 lbs. metallic copper)*	25.2 lbs. *(12.6 lbs. metallic copper)*	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- to 14-day schedule if needed as soon as symptoms are observed.
	Bacterial Stem Canker			Apply post-harvest and again in spring at bud swell. Apply one or two additional applications at 7- to 14-day intervals if needed depending on disease severity.
	Leaf Blight, Red Leaf Spot, Stem Blight, Tip Blight (*Monilinia*)			Apply delayed dormant spray in the spring. Repeat at 7- to 14-day intervals if needed through pre-bloom.
Restrictions: • Maximum single application rate is 4.2 lbs./A (2.1 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not make more than 6 applications per year.				
Currant, Gooseberry	Anthracnose, Leaf Spot	5 – 8 lbs. *(2.5 – 4 lbs. metallic copper)*	20 – 32 lbs. *(10 - 16 lbs. metallic copper)*	Make initial application after first leaves have expanded. Continue on a 10- to 14-day schedule if needed during wet conditions in the spring. Make an additional application after harvest.
Restrictions: • Maximum single application rate is 8.0 lbs./A (4.0 lbs. metallic copper equivalent). • Minimum retreatment interval is 10 days. • Do not make more than 4 applications per year at the maximum single application rate.				
Raspberry	Anthracnose, Cane Spot, Leaf Spot, Pseudomonas Blight, Purple Blotch, Yellow Rust	4 lbs. *(2 lbs. metallic copper)*	20 lbs. *(10 lbs. metallic copper)*	Make fall application after harvest. Apply delayed dormant spray after training in the spring. If needed, agricultural-type spray oil may be added. • Maximum single application rate is 4.0 lbs./A (2.0 lbs. metallic copper equivalent).

	Anthracnose, Cane Spot, Leaf Spot, Purple Blotch, Yellow Rust	2 lbs. *(1 lbs. metallic copper)*		Apply when leaf buds begin to open and repeat when flower buds show white. Repeat on a 7-day interval if needed. If needed, agricultural-type spray oil may be added. **IMPORTANT:** Crop injury may occur if applied to foliage under certain environmental conditions including hot or prolonged moist periods. Discontinue applications if signs of crop injury appear. • Maximum single application rate is 4.0 lbs./A (2.0 lbs. metallic copper equivalent).
Restrictions: • Minimum retreatment interval is 7 days. • Do not make more than 5 applications per year at the maximum single application rate.				
Strawberry	Angular Leaf Spot (*Xanthomonas*), Leaf Blight, Leaf Scorch, Leaf Spot	2 – 3 lbs. *(1-1.5 lbs. metallic copper)*	12 lbs. *(6 lbs. metallic copper)*	Begin application when plants are established and continue on a weekly schedule throughout the year. Apply in at least 20 gallons of water. Use the higher rates when conditions favor disease. **IMPORTANT:** Discontinue applications if signs of crop injury appear.
Restrictions: • Maximum single application rate is 3.0 lbs./A (1.5 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not make more than 4 applications per year at the maximum single application rate.				

TREE CROPS ***Almond, Apple, Apricot, Avocado, Banana/Plantain, Cacao, Cherry, Coffee, Filbert, Mango, Nectarine, Olive, Peach, Pear, Pecan, Pistachio, Plum, Prune, Quince and Walnut***				
Crop	**Disease**	**Application Rate/Acre**	**Maximum Annual Rate/Acre**	**Use Instructions**
Almond	Bacterial Blast	1 – 3 lbs. *(0.5-1.5 lbs. metallic copper)*	35.9 lbs. *(18 lbs. metallic copper)*	For bacterial blast control in sprinkler irrigated orchards or where disease is severe, apply 1.0 to 3.0 pounds of product per acre post-bloom at 2-week intervals if needed or just before sprinkling. Do not exceed the maximum annual rate. **Restrictions:** • Do not make more than 12 applications per year at the maximum single application rate. • Maximum single application rate is 3.0 lbs./A (1.5 lbs. metallic copper equivalent)
	Bacterial Spot (*Xanthomonas arboricola pv. Pruni*)	8 – 16 lbs. *(4-8 lbs. metallic copper)*		**Dormant:** Make first application at late dormant. Use the higher rates when conditions favor disease. **Restrictions:** • Do not make more than 2 applications per year at the maximum single application rate. • Maximum single application rate is 16.0 lbs./A (8.0 lbs. metallic copper equivalent)
		0.5 – 2 lbs. *(0.25-1 lbs. metallic copper)*		**Pink through Full Bloom:** Maximum single use rate is 2.0 pounds of product per acre. **Petal Fall:** Maximum single use rate is 1.0 pound of product per acre. **Post-Petal Fall:** Maximum single use rate is 0.5 pound of product per acre.

				Time sprays around rain events and temperature. Make a minimum of one application to prevent new infections. **IMPORTANT:** Copper applied after bloom can be potentially phytotoxic. Leaf spotting and premature leaf fall can occur if rates are extended. **Restrictions:** • Do not make more than 18 applications per year at the maximum single application rate.
	Blossom Brown Rot, Coryneum Blight (Shot Hole)	3 lbs. *(1.5 lbs. metallic copper)*		Apply during early bloom. Do not apply after full bloom or injury may occur. **Restrictions:** • Do not make more than 12 applications per year at the maximum single application rate. • Maximum single application rate is 3.0 lbs./A (1.5 lbs. metallic copper equivalent)
Restrictions: • Minimum Dormant, late dormant retreatment interval is 7 days. • Minimum bloom/growing year retreatment interval is 5 days.				

Almond, Apricot, Cherry, Plum, Prune	Bacterial Blast (*Pseudomonas*), Bacterial Canker, Coryneum Blight (Shot Hole)	8 – 16 lbs. *(4-8 lbs. metallic copper)*	35.9 lbs. *(18 lbs. metallic copper)*	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. Minimum retreatment interval is 7 days. **For Cherries:** Where disease is severe, an additional application shortly after harvest may be required. **IMPORTANT:** Foliar injury may occur from post-bloom sprays on almonds, especially on NePlus varieties. **Restrictions:** • Do not make more than 2 applications per year at the maximum single application rate. • Maximum single application rate is 16.0 lbs./A (8.0 lbs. metallic copper equivalent).
	Blossom Brown Rot, Coryneum Blight (Shot Hole)	2 – 3 lbs. *(1-1.5 lbs. metallic copper)*		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:** • Do not make more than 12 applications per year at the maximum single application rate. • Maximum single application rate is 3.0 lbs./A (1.5 lbs. metallic copper equivalent).
	Black Knot (Plum)	2 – 3 lbs. *(1-1.5 lbs. metallic copper)*		Make an application at bud swell up to early bloom for early season disease suppression. Apply before full bloom. Minimum retreatment interval is 5 days. Use the higher rates when rainfall is heavy and disease pressure is high. **Restrictions:** • Do not make more than 12 applications

				per year at the maximum single application rate. • Maximum single application rate is 3.0 lbs./A (1.5 lbs. metallic copper equivalent) **IMPORTANT:** To avoid plant injury, do not use after full bloom.
	Cherry Leaf Spot (Sour Cherries Only)	3 lbs. *(1.5 lbs. metallic copper)*		Apply at petal fall as well as 1 to 2 times after petal fall. Do not apply to sweet cherry or the English Morello variety as severe injury will result. The addition of 1 to 3 pounds of hydrated lime per pound of Kocide® 50DF may reduce crop injury. **Restrictions:** • Do not make more than 12 applications per year at the maximum single application rate. • Maximum single application rate is 3.0 lbs./A (1.5 lbs. metallic copper equivalent). **IMPORTANT:** Moderate to severe injury including leaf spotting and defoliation may occur from post-bloom applications.
Restrictions: • Minimum Dormant, late dormant retreatment interval is 7 days. • Minimum bloom/growing year retreatment interval is 5 days.				
Cherry	Anthracnose	8 – 16 lbs. *(4-8 lbs. metallic copper)*	35.9 lbs. *(18 lbs. metallic copper)*	In orchards where the disease is severe, a spray should also be applied shortly after harvest.
Restrictions: • Minimum dormant, late dormant retreatment interval is 7 days. • Minimum bloom/growing year retreatment interval is 5 days. • Do not make more than 2 applications per year at the maximum single application rate. • Maximum single application rate is 16.0 lbs./A (8.0 lbs. metallic copper equivalent).				

Apple	Anthracnose, Blossom Blast, European Canker (*Nectria*), Shoot Blast (*Pseudomonas*)	12 lbs. *(6 lbs. metallic copper)*	31.9 lbs. *(16 lbs. metallic copper)*	Apply before fall rains. **IMPORTANT:** Use on yellow varieties may cause discoloration. To avoid discoloration, pick before spraying. Only one dormant application allowed per year. **Restrictions:** • Maximum single application rate is 12.0 lbs./A (6.0 lbs. metallic copper equivalent).
	Apple Scab, Fire Blight	4 – 12 lbs. *(2-6 lbs. metallic copper)*		Make application between silver-tip and green-tip. Apply as a full cover spray for early season disease suppression. **Restrictions:** • Maximum single application rate is 12.0 lbs./A (6.0 lbs. metallic copper equivalent). • Moderate to severe crop injury may occur from late application; discontinue use when green-tip reaches ½ inch. Only one application allowed per year between silver-tip and green-tip.
	Apple Scab	1 lbs. *(0.5 lbs. metallic copper)*		Extended spray schedule where fruit finish is not a concern: Continued applications may be made at 5- to 7-day intervals if needed between ½ inch green-tip and first cover spray. **Restrictions:** • Maximum single application rate is 1.3 lbs./A (0.65 lbs. metallic copper equivalent). • Moderate to severe crop injury may result from this extended spray schedule. It is not intended for fresh market apples or for apples where fruit finish
	Fire Blight	1.3 lbs.		

				is a concern as it is likely to cause fruit russetting. The addition of 1 to 3 pounds of hydrated lime per pound of Kocide® 50DF may reduce crop injury.
	Collar Rot, Crown Rot	4 lbs. *(2 lbs. metallic copper)*		Mix in 100 gallons of water. Apply 4 gallons of suspension as a drench on the lower trunk area of each tree. Apply in early spring or in fall after harvest for best results. Do not apply to foliage or fruit. This rate cannot be used during bloom or growing year. **Restrictions:** • Maximum single application rate is 1.3 lbs./A (0.65 lbs. metallic copper equivalent). • Do not use if soil pH is below 5.5 since copper toxicity may result.
Restrictions: • Do not make more than one dormant application per year. • Do not make more than one application between silver-tip and green-tip per year. • Minimum bloom and growing year retreatment interval is 5 days. • Do not use if soil pH is below 5.5, copper toxicity may result.				
Avocado	Anthracnose, Blotch, Scab	4 – 6.2 lbs. *(2-3.1 lbs. metallic copper)*	37.2 lbs. *(18.6 lbs. metallic copper)*	Apply when bloom buds begin to swell and continue application at 14- to 30-day intervals for five to six applications. Use the higher rates when conditions favor disease.
Restrictions: • Minimum retreatment interval is 14 days. • Do not exceed 6 applications per year at the maximum single application rate. • Maximum single application rate is 6.2 lbs./A (3.1 lbs. metallic copper equivalent).				
Banana, Plantain	Sigatoka (Black and Yellow)	2.1 lbs. *(1.05 lbs. metallic copper)*	37.7 lbs. *(18.9 lbs. metallic copper)*	Apply by air in 3 gallons of water. Apply at 7- to 14-day intervals if needed. If needed, agricultural-type spray oil may be added. Apply at 21-day intervals during dry periods.
	Black Pitting			Mix in 100 gallons of water. Apply to the fruit stem and the basal portion of the leaf crown. Apply during the first and second weeks after fruit emergence.

Restrictions: • Minimum retreatment interval is 7 days. • Maximum single application rate is 2.1 lbs./A (1.05 lbs. metallic copper equivalent). • Do not exceed 17 applications per year.				
Cacao	Black Pod	2 - 4.5 lbs. *(1-2.25 lbs. metallic copper)*	31.5 lbs. *(15.75 lbs. metallic copper)*	Begin applications at the start of the rainy season and continue while infection conditions persist. Apply at 14- to 21-day intervals if needed depending on disease severity. For drier areas, make two to four applications using 2 to 4 pounds of product per acre according to disease incidence and planting density.
Restrictions: • Minimum retreatment interval is 14 days. • Maximum single application rate is 4.5 lbs./A (2.25 lbs. metallic copper equivalent). • Do not exceed 7 applications per year at the maximum single application rate.				
Coffee	Coffee Berry Disease (*Colletotrichum coffeanum*)	4.2 lbs. *(2.1 lbs. metallic copper)*	25.1 lbs. *(12.6 lbs. metallic copper)*	Apply first spray after flowering and before onset of long rains and then at 14- to 28-day intervals if needed until picking.
	Bacterial Blight (*Pseudomonas syringae*)			Begin spray program before the onset of long rainy periods and continue throughout the rainy season at 14- to 21-day intervals if needed. The critical time for spraying to control this disease is just before, during and after flowering(s), especially when coinciding with wet weather.
	Leaf Rust (*Hemileia vastatrix*)	3 – 4.2 lbs. *(1.5-2.1 lbs. metallic copper)*		Apply before the onset of rain and then at 14- to 21-day intervals if needed while the rains continue. Use the higher rates when rainfall is heavy and disease pressure is high.
	Iron Spot (*Cercospora coffeicola*), Pink Disease (*Corticium salmonicolor*)	2 lbs. *(1 lbs. metallic copper)*		Use concentrate or dilute spray. Begin treatment at the start of wet season and continue at 14 – 28 days intervals for three applications.

Restrictions: • Minimum retreatment interval is 14 days. • Maximum single application rate is 4.2 lbs./A (2.1 lbs. metallic copper equivalent). • Do not exceed 6 applications per year at the maximum single application rate.				
Filbert (only for use in Washington State & Oregon)	Bacterial Blight	8 – 12 lbs. *(4-6 lbs. metallic copper)*	36 lbs. *(18 lbs. metallic copper)*	Apply as a post-harvest spray. In seasons of heavy rainfall, apply a second spray when three-fourths of the leaves have dropped. Use the higher rates when rainfall is heavy and disease pressure is high. If needed, agricultural-type spray oil may be added. Minimum retreatment interval is 14 days.
	Eastern Filbert Blight			Apply as a dilute spray in adequate water for thorough coverage. Make applications starting at bud swell to bud break and continue at 14-day intervals if needed until early May. Thorough coverage is essential. Use the higher rates when rainfall is heavy and disease pressure is high. If needed, agricultural-type spray oil or sticking agent may be added. Minimum retreatment interval is 14 days.
Restrictions: • Minimum retreatment interval is 14 days. • Maximum single application rate is 12.0 lbs./A (36.0 lbs. metallic copper equivalent). • Do not exceed 3 applications per year at the maximum single application rate.				
Mango	Anthracnose	4 – 6.4 lbs. *(2-3.2 lbs. metallic copper)*	95.8 lbs. *(48 lbs. metallic copper)*	Apply at 7- to 30-day intervals after fruit set until harvest. Use the higher rates when rainfall is heavy and disease pressure is high.
Restriction: • Minimum retreatment interval is 7 days. • Maximum single application rate is 6.4 lbs./A (3.2 lbs. metallic copper equivalent). • Do not make more than 14 applications per year at the maximum single application rate				

Olive	Olive Knot, Peacock Spot	5 – 12 lbs. *(2.5-6 lbs. metallic copper)*	36 lbs. *(18 lbs. metallic copper)*	Make first application before winter rains begin. A second application in early spring should be made if disease is severe. Apply the higher rates for heavy disease pressure or when conditions favor disease development.

Restrictions:

- Minimum retreatment interval is 30 days.
- Maximum single application rate is 12.0 lbs./A (6.0 lbs. metallic copper equivalent).
- Do not exceed 3 applications per year at the maximum single application rate.

Peach, Nectarine	Bacterial Blast (*Pseudomonas*), Bacterial Canker, Bacterial Spot (*Xanthomonas*), Coryneum Blight (Shot Hole), Leaf Curl	8 – 16 lbs. *(4-8 lbs. metallic copper)*	36 lbs. *(18 lbs. metallic copper)*	Make first application before fall rains and a second at late dormant. For peach leaf curl, late dormant application must be made before leaf buds swell. Use the higher rates when rainfall is heavy and disease pressure is high. If needed, agricultural-type spray oil may be added. Minimum retreatment interval is 7 days. **Restrictions:** • Do not make more than 2 applications per year at the maximum single application rate. • Maximum single application rate is 16.0 lbs./A (8.0 lbs. metallic copper equivalent).
	Blossom Brown Rot, Coryneum Blight (Shot Hole), Leaf Curl	3 – 6 lbs. *(1.5-3 lbs. metallic copper)*		Full cover spray at pink bud. Use the higher rates when conditions favor disease. Do not apply at this rate past pink bud. After pink bud, the maximum use rate is 3 pounds of product (1.5 pounds of metallic copper) throughout bloom and growing year. **Restrictions:** • Do not make more than 6 applications per year at the maximum single application rate. • Maximum single application rate is 6.0 lbs./A (3.0 lbs. metallic copper equivalent).
	Bacterial Spot	1 – 3* lbs. *(0.5-1.5 lbs. metallic copper)*		Apply as a post-bloom cover spray. Repeat at 5-day intervals if needed. **Restrictions:** • Do not make more than 12 applications per year at the maximum single application rate. • Maximum single application rate is 3.0 lbs./A (1.5 lbs. metallic

				copper equivalent). • Do not spray three weeks prior to harvest. Spotting of leaves and defoliation may occur from use in cover sprays. Discontinue use if injury occurs. *Maximum single bloom and growing year application is 3.0 pounds (1.5 lbs. metallic copper) per acre.
Restrictions: • Dormant up to pink bud - Minimum application interval is 7 days. • Bloom and growing year - Minimum retreatment interval is 5 days.				
Pear	Fire Blight	1 lb. *(0.5 lb. metallic copper)*	32 lbs. *(16 lbs. metallic copper)*	Apply at 5 day intervals if needed throughout the bloom period. **IMPORTANT:** Russetting may occur in copper sensitive varieties. Excessive dosages may cause fruit russet on any variety. **Restriction:** Do not make more than 32 applications per year at the maximum single application rate.
	Blossom Blast (Pseudomonas)	8-12 lbs. (4-6 lbs. metallic copper)		Apply before fall rains and again during dormancy before spring growth starts. Use the higher rates when disease pressure is high or when conditions favor disease development. Only one application is allowed during dormancy per year. **Restriction:** Do not make more than 2 applications per year at the maximum single application rate.
Restriction: • Minimum retreatment interval is 5 days.				

Pecan	Kernel Rot, Shuck Rot (*Phytophthora cactorum*), Zonate Leaf Spot (*Cristulariella pyramidalis*)	2 – 4.2 lbs. *(1-2.1 lbs. metallic copper)*	12.6 lbs. *(6.3 lbs. metallic copper)*	For suppression, apply in sufficient water to ensure complete spray coverage at 2- to 4-week intervals if needed, starting at kernel growth and continue until shucks open. Use the higher rates and shorter spray intervals if frequent rainfall occurs.
	Ball Moss, Spanish Moss			Apply in 100 gallons of water in the spring when ball moss is actively growing, using 1.5 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. A second application may be required after 12 months.
Restrictions: • Minimum retreatment interval is 14 days. • Maximum single application rate is 4.2 lbs./A (2.1 lbs. metallic copper equivalent). • Do not exceed 3 applications per year at the maximum single application rate.				
Pistachio	Botryosphaeria Panicle and Shoot Blight, Botrytis Blight, Late Blight (*Alternaria alternata*), Septoria Leaf Blight	3 – 4.2 lbs. *(1.5-2.1 lbs. metallic copper)*	16.8 lbs. *(8.4 lbs. metallic copper)*	Make initial application at bud swell and repeat on a 14- to 28-day schedule if needed. If disease conditions are severe, use the higher rates and shorter spray intervals.
Restrictions: • Minimum retreatment interval is 14 days. • Maximum single application rate is 4.2 lbs./A (2.1 lbs. metallic copper equivalent). • Do not exceed 4 applications per year at the maximum single application rate.				
Quince	Fire Blight	1 lb. *(0.5 lbs. metallic copper)*	31.9 lbs. *(16 lbs. metallic copper)*	Apply at 5 day intervals if needed throughout the bloom period. Apply in

				adequate water for thorough coverage.
Restriction: • Minimum retreatment interval is 5 days. • Maximum single application rate is 1.0 lbs./A (0.5 lbs. metallic copper equivalent). • Do not make more than 32 applications per year at the maximum single application rate.				
Walnut	Walnut Blight	5 – 8 lbs. *(2.5-4 lbs. metallic copper*)	63.9 lbs. *(32 lbs. metallic copper)*	Apply first spray at early pre-bloom prior to or when catkins are partially expanded. Make additional applications during bloom and early nutlet stage on a 7 day interval if needed when frequent rainfall or extended periods of moisture occur. Thorough coverage of catkins, leaves and nutlets is essential for effective control. **IMPORTANT:** Adequate control may not be obtained when copper tolerant species of Xanthomonas bacteria are present.
Restriction: • Minimum retreatment interval is 7 days. • Maximum single application rate is 8.0 lbs./A (4.0 lbs. metallic copper equivalent). • Do not make more than 8 applications per year at the maximum single application rate.				

VEGETABLES

Bean, Beet, Beet Greens, Broccoli, Brussels Sprout, Cabbage, Chinese Cabbage, Cantaloupe, Carrot, Cauliflower, Celeriac, Celery, Cucumber, Eggplant, Greens (Collard, Mustard and Turnip), Honeydew, Kale, Kohlrabi, Lettuce, Muskmelon, Okra, Onion/Garlic/Leek, Pea, Pepper, Pumpkin, Spinach, Squash, Tomato, Watercress and Watermelon

Crop	Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions
Bean (Dry, Green)	Brown Spot, Common Blight, Halo Blight	1 – 1.5 lbs. *(0.5-0.75 lbs. metallic copper)*	9 lbs. *(4.5 lbs. metallic copper)*	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 for more severe disease.
Restrictions: • Minimum retreatment interval is 7 days. • Maximum single application rate is 1.5 lbs./A (0.75 lbs. metallic copper equivalent). • Do not exceed 6 applications per acre per year at the maximum single application rate.				

Beet (Table Beet, Beet Greens)	Cercospora Leaf Spot	2 – 2.5 lbs. *(1-1.25 lbs. metallic copper)*	15 lbs. *(7.5 lbs. metallic copper)*	Begin applications when conditions first favor disease development and repeat at 10- to 14-day intervals if needed. Use the higher rates when conditions favor disease.
Restrictions: • Minimum retreatment interval is 10 days. • Maximum single application rate is 2.5 lbs./A (1.25 lbs. metallic copper equivalent). • Do not exceed 6 applications per year at the maximum single application rate.				
Carrot	Alternaria Leaf Spot, Cercospora Leaf Spot	2 lbs. *(1 lbs. metallic copper)*	10 lbs. *(5 lbs. metallic copper)*	Begin applications when disease first threatens and repeat at 7- to 14-day intervals if needed depending on disease severity.
Restrictions: • Minimum retreatment interval is 7 days. • Maximum single application rate is 2.0 lbs./A (1.0 lbs. metallic copper equivalent). • Do not exceed 5 applications per year.				
Celery, Celeriac	Bacterial Blight, Cercospora Early Blight, Septoria Late Blight	2 lbs. *(1 lbs. metallic copper)*	10 lbs. *(5 lbs. metallic copper)*	Begin applications as soon as plants are first established in the field, repeating at 7-day intervals if needed depending on disease severity and environmental conditions.
Restrictions: • Minimum retreatment interval is 7 days. • Maximum single application rate is 2.0 lbs./A (1.0 lbs. metallic copper equivalent). • Do not exceed 5 applications per year.				
Crucifers (Broccoli; Brussels Sprout; Cabbage; Cabbage, Chinese; Cauliflower; Greens, Collard; Greens, Mustard; Greens, Turnip; Kale; Kohlrabi)	Black Leaf Spot (*Alternaria*), Black Rot (*Xanthomonas*), Downy Mildew	1 lbs. *(0.5 lbs. metallic copper)*	5 lbs. *(2.5 lbs. metallic copper)*	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. **IMPORTANT:** Reddening of older leaves may occur on broccoli and a flecking of wrapper leaves may occur on cabbage.
Restrictions: • Minimum retreatment interval is 7 days. • Maximum single application rate is 1.0 lbs./A (0.5 lbs. metallic copper equivalent). • Do not exceed 5 applications per year.				

Cucurbits (Cantaloupe, Cucumber, Honeydew, Muskmelon, Pumpkin, Squash, Watermelon, Casaba, Chayote, Citron melon, Gourd, Waxgourd)	Alternaria Leaf Spot, Angular Leaf Spot, Anthracnose, Downy Mildew, Gummy Stem Blight, Powdery Mildew, Watermelon Bacterial Fruit Blotch (suppression)	1.5 – 2 lbs. *(0.75-1 lbs. metallic copper)*	10 lbs. *(5 lbs. metallic copper)*	Begin applications prior to disease development and continue while conditions are favorable for disease development. Repeat at 5- to 7-day intervals if needed. Use the higher rates when conditions favor disease. **IMPORTANT:** Crop injury may occur from application at higher rates and shorter intervals. Discontinue use if injury occurs.
Restrictions: • Minimum retreatment interval is 5 days. • Maximum single application rate is 2.0 lbs./A (1.0 lbs. metallic copper equivalent). • Do not exceed 5 applications per year at the maximum single application rate.				
Eggplant	Alternaria Blight, Anthracnose, Phomopsis	1.5 lbs. *(0.75 lbs. metallic copper)*	15 lbs. *(7.5 lbs. metallic copper)*	Begin applications prior to development of disease symptoms. Repeat sprays at 7- to 10-day intervals if needed depending on disease severity.
Restrictions: • Minimum retreatment interval is 7 days. • Maximum single application rate is 1.5 lbs./A (0.75 lbs. metallic copper equivalent). • Do not exceed 10 applications per year.				
Lettuce Including Endive, Escarole	Downy Mildew	1 – 2 lbs. *(0.5-1 lbs. metallic copper)*	16 lbs. *(8 lbs. metallic copper)*	Begin applications when disease symptoms first appear or when conditions favor disease development. Repeat at 5- to 10-day intervals if needed depending on disease severity. **IMPORTANT:** 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.
Restrictions: • Minimum retreatment interval is 5 days. • Maximum single application rate is 2.0 lbs./A (1.0 lbs. metallic copper equivalent). • Do not exceed 8 applications per year at the maximum single application rate.				

Okra	Anthracnose, Bacterial Leaf Spot, Leaf Spots, Pod Spot, Powdery Mildew	1 – 2 lbs. *(0.5-1 lbs. metallic copper)*	10 lbs. *(5 lbs. metallic copper)*	Begin treatment when disease first threatens and repeat every 5 to 10 days if needed depending on disease severity. Use the higher rates and shorter spray intervals when conditions favor disease.
Restrictions: • Minimum retreatment interval is 5 days. • Maximum single application rate is 2.0 lbs./A (1.0 lbs. metallic copper equivalent). • Do not exceed 5 applications per year at the maximum single application rate.				
Onion, Garlic, Leek	Bacterial Blight	1 – 1.5 lbs. *(0.5-0.75 lbs. metallic copper)*	12 lbs. *(6 lbs. metallic copper)*	Begin when plants are 4 to 6 inches high and repeat at 7- to 10-day intervals if needed depending on disease severity. Can cause phytotoxicity to leaves.
	Downy Mildew, Purple Blotch	2 lbs. *(1 lbs. metallic copper)*		
Restrictions: • Minimum retreatment interval is 7 days. • Maximum single application rate is 2.0 lbs./A (1.0 lbs. metallic copper equivalent). • Do not exceed 6 applications per year at the maximum single application rate.				
Pea	Powdery Mildew	1.5 lbs. *(0.75 lbs. metallic copper)*	7.5 lbs. *(3.8 lbs. metallic copper)*	Begin applications when disease symptoms first appear and repeat at weekly intervals if needed.
Restrictions: • Minimum retreatment interval is 7 days. • Maximum single application rate is 1.5 lbs./A (0.75 lbs. metallic copper equivalent). • Do not exceed 5 applications per year.				
Pepper (bell, chili)	Anthracnose, Bacterial Spot, Cercospora Leaf Spot	1.5 lbs. *(0.75 lbs. metallic copper)*	22.5 lbs. *(11.3 lbs. metallic copper)*	Begin applications when conditions first favor disease development and repeat at 3- to 10-day intervals if needed depending on disease severity.
Restrictions: • Minimum retreatment interval is 3 days. • Maximum single application rate is 1.5 lbs./A (0.75 lbs. metallic copper equivalent). • Do not exceed 15 applications per year.				
Spinach	Anthracnose, Blue Mold, Cercospora Leaf Spot, Downy Mildew*, White Rust disease	1.5 lbs. *(0.75 lbs. metallic copper)*	7.5 lbs. *(3.8 lbs. metallic copper)*	Begin application when disease first appears or when conditions favor disease development. Repeat at 7- to 10-day intervals if needed. **IMPORTANT:** Flecking may occur on spinach leaves.

Restrictions: • Minimum retreatment interval is 7 days. • Maximum single application rate is 1.5 lbs./A (0.75 lbs. metallic copper equivalent). • Do not exceed 5 applications per year. • *Not registered for use in California.				
Tomato (processing)	Anthracnose, Bacterial Speck, Bacterial Spot, Early Blight, Gray Leaf Mold, Grey Leaf Spot, Late Blight, Septoria Leaf Spot	1 lbs. *(0.5 lbs. metallic copper)*	34.7 lbs. *(17.4 lbs. metallic copper)*	Begin applications when disease first threatens and repeat at 3- to 10-day intervals if needed depending on disease severity. Use the higher rates when conditions favor disease. **Restriction:** Do not make more than 34 applications per year at the maximum single application rate.
Tomato (fresh market)		2 – 3 lbs. *(1-1.5 lbs. metallic copper)*	16 lbs. *(8 lbs. metallic copper)*	For fresh market tomatoes, use the higher rate when conditions favor disease. **Restriction:** Do not make more than 5 applications per year at the maximum single application rate.
Restriction: • Minimum retreatment interval is 3 days.				
Watercress	Cercospora Leaf Spot	1 lbs. *(0.5 lbs. metallic copper)*	4 lbs. *(2 lbs. metallic copper)*	For applications made to watercress, 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 to be applied to watercress during the aquatic production phase. Begin applications when plants are first established in the field, repeating at 7- to 14-day intervals if needed depending on disease severity. Apply using ground spray equipment at no less than 50 gallons of spray solution per acre. Do not exceed four applications per crop.
Restrictions: • Minimum retreatment interval is 7 days. • Maximum single application rate is 1.0 lbs./A (0.75 lbs. metallic copper equivalent). • Do not exceed 4 applications per year.				

VINES *Grape, Hops and Kiwi*				
Crop	**Disease**	**Application Rate/Acre**	**Maximum Annual Rate/Acre**	**Use Instructions**
Grape	Black Rot, Downy Mildew, Phomopsis, Powdery Mildew	2 – 6 lbs. *(1-3 lbs. metallic copper)*	36 lbs. *(18 lbs. metallic copper)*	Begin applications at late dormant with subsequent applications throughout the year depending on disease severity. Repeat at 3-day intervals if needed. Use the higher rates when conditions favor disease. Minimum retreatment interval is 3 days. **IMPORTANT:** Foliage injury may occur on copper sensitive varieties including Concord, Delaware, Niagara and Rosette. Either test for sensitivity or add 1 to 3 pounds of hydrated lime per pound of Kocide® 50DF.
Restrictions: • Minimum retreatment interval is 3 days. • Maximum single application rate is 1.0 lbs./A (0.5 lbs. metallic copper equivalent). • Maximum single application rate is 6.0 lbs./A (3.0 lbs. metallic copper equivalent). • Do not exceed 6 applications per year at the maximum single application rate.				
Hops	Downy Mildew	1 lbs. *(0.5 lbs. metallic copper)*	5 lbs. *(2.5 lbs. metallic copper)*	Make crown treatment after pruning, but before training. After training, apply at 10-day intervals if needed.
Restrictions: • Minimum retreatment interval is 10 days. • Maximum single application rate is 1.0 lbs./A (0.5 lbs. metallic copper equivalent). • Do not exceed 5 applications per year. • Do not use within 2 weeks of harvest.				
Kiwi	*Erwinia herbicola*, *Pseudomonas fluorescens*, *Pseudomonas syringae*	4.2 lbs. *(2.1 lbs. metallic copper)*	12.6 lbs. *(6.3 lbs. metallic copper)*	Apply in 200 gallons of water per acre. Make applications on a monthly basis. Do not exceed three applications per year.
Restrictions: • Minimum retreatment interval is 30 days. • Maximum single application rate is 4.2 lbs./A (2.1 lbs. metallic copper equivalent). • Do not exceed 3 applications per year.				

MISCELLANEOUS ***Atemoya, Carambola, Chives, Dill, Ginseng, Guava, Litchi, Live Oak*, Macadamia, Mamey Sapote, Papaya, Parsley, Passion Fruit, Sugar Apple, and Sycamore***				
Crop	**Disease**	**Application Rate/Acre**	**Maximum Annual Rate/Acre**	**Use Instructions**
Atemoya	Anthracnose	4 – 6.3 lbs. *(2-3.15 lbs. metallic copper)*	25.2 lbs. *(12.6 lbs. metallic copper)*	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 6.3 lbs./A (3.15 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not exceed 4 applications per year at the maximum single application rate.				
Carambola	Anthracnose	4.2 lbs. *(2.1 lbs. metallic copper)*	21 lbs. *(10.5 lbs. metallic copper)*	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 4.2 lbs./A (2.1 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not exceed 5 applications per year.				
Chives	Downy Mildew	1 lbs. *(0.5 lbs. metallic copper)*	5 lbs. *(2.5 lbs. metallic copper)*	Begin applications when plants are established in the field. Repeat applications every 7 to 10 days if needed depending on disease conditions.
Restrictions: • Maximum single application rate is 1.0 lbs./A (0.5 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not exceed 5 applications per year.				
Dill	Phoma Leaf Spot, Rhizoctonia Foliage Blight	1.5 lbs. *(0.75 lbs. metallic copper)*	7.5 lbs. *(3.8 lbs. metallic copper)*	Begin applications when plants are first established in the field and repeat at 7- to 10-day intervals if needed depending upon disease severity and environmental conditions.
Restrictions: • Maximum single application rate is 1.5 lbs./A (0.75 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not exceed 5 applications per year.				

Ginseng	Alternaria Leaf Blight, Stem Blight	2.1 lbs. *(1.05 lbs. metallic copper)*	10.5 lbs. *(5.25 lbs. metallic copper)*	Use as a tank mix with the appropriate amount of a product containing the active ingredient iprodione in 100 gallons of water. Use in accordance with the most restrictive of label limitations and precautions. No label dosage rates are to be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Begin Kocide® 50DF "iprodione" applications as soon as plants have emerged in spring. Applications can be repeated every 7 days if needed until plants become dormant in fall. Apply fungicides at least 8 hours before rain. Use of a spreader-sticker or sticker is advised. **IMPORTANT:** Alternaria Leaf and Stem Blight is most severe in humid conditions including those found in the dense canopies of 2- to 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.
Restrictions: • Maximum single application rate is 2.1 lbs./A (1.05 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not exceed 5 applications per year.				
Guava	Anthracnose, Red Algae	2.4 lbs. *(1.2 lbs. metallic copper)*	9.6 lbs. *(4.8 lbs. metallic copper)*	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 2.4 lbs./A (1.2 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not exceed 4 applications per year.				

Litchi	Anthracnose	2.4 lbs. *(1.2 lbs. metallic copper)*	9.6 lbs. *(4.8 lbs. metallic copper)*	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 2.4 lbs./A (1.2 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not exceed 4 applications per year.				
Live Oak*	Ball Moss, Spanish Moss	4 lbs. *(2 lbs. metallic copper)*	4 lbs. *(2 lbs. metallic copper)*	Mix 4 lbs. of product per 100 gallons of water. Apply in the spring when ball moss is actively growing, using 1.5 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. A second application may be required after 12 months.
Restrictions: • Maximum single application rate is 4.0 lbs./A (2.0 lbs. metallic copper equivalent). • Minimum retreatment interval is 12 months. • Make only 1 application per year. • Do not spray on cars, houses, lawn furniture, etc. This product may be injurious to ornamentals grown under Live Oaks. This product may be reactive on metal and masonry surfaces including galvanized roofing. Avoid contact with metal surfaces. • *Not registered for use in California.				
Macadamia	Anthracnose	4.7 lbs. *(2.35 lbs. metallic copper)*	18.8 lbs. *(9.4 lbs. metallic copper)*	Initiate sprays at first sign of flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.
	Phytophthora Blight (*P. capsici*), Raceme Blight (*Botrytis cinerea*)	3 – 4 lbs. *(1.5-2 lbs. metallic copper)*		Apply during raceme development and bloom periods. 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 (2.0 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not exceed 4 applications per year at the maximum single application rate.				

Mamey Sapote	Algal Leaf Spot, Anthracnose	3 – 4.2 lbs. *(1.5-2.1 lbs. metallic copper)*	16.8 lbs. *(8.4 lbs. metallic copper)*	Apply when conditions favor disease development. Repeat on 14- to 30-day schedule if needed as disease severity and environmental conditions dictate. Use the higher rates when conditions favor disease.
Restrictions: • Maximum single application rate is 4.2 lbs./A (2.1 lbs. metallic copper equivalent). • Minimum retreatment interval is 14 days. • Do not exceed 4 applications per year at the maximum single application rate.				
Papaya	Anthracnose	4 – 5 lbs. *(2-2.5 lbs. metallic copper)*	42.4 lbs. *(21.2 lbs. metallic copper)*	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 5.0 lbs./A (2.5 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not exceed 8 applications per year at the maximum single application rate.				
Parsley	Bacterial Blight (*Pseudomonas* sp.)	2 lbs. *(1 lbs. metallic copper)*	4 lbs. *(2 lbs. metallic copper)*	Begin applications when plants are first established in the field and repeat again at 10 days if needed depending on disease severity and environmental conditions.
Restrictions: • Maximum single application rate is 2.0 lbs./A (1.0 lbs. metallic copper equivalent). • Minimum retreatment interval is 10 days. • Do not exceed 2 applications per year.				
Passion Fruit	Anthracnose	4.7 lbs. *(2.35 lbs. metallic copper)*	18.8 lbs. *(9.4 lbs. metallic copper)*	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 4.7 lbs./A (2.35 lbs. metallic copper equivalent). • Minimum retreatment interval is 7 days. • Do not exceed 4 applications per year.				
Sugar Apple (Annona)	Anthracnose	6.3 lbs. *(3.15 lbs. metallic copper)*	25.2 lbs. *(12.6 lbs. metallic copper)*	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 6.3 lbs./A (3.15 lbs. metallic copper equivalent).
- Minimum retreatment interval is 7 days.
- Do not exceed 4 applications per year.

Sycamore	Anthracnose	2 – 4 lbs. *(1-2 lbs. metallic copper)*	40 lbs. *(20 lbs. metallic copper)*	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.

Restriction:

- Maximum single application rate is 4.0 lbs./A (2.0 lbs. metallic copper equivalent).
- Minimum retreatment interval is 7 days.
- Do not make more than 10 applications per year at the maximum single application rate.

CONIFERS

For use on conifers, including Douglas Fir, Fir, Juniper, Leyland Cypress, Pine and Spruce, in Christmas tree plantings and silviculture nurseries.

For control of foliar diseases, apply Kocide® 50DF as a thorough cover spray at rates ranging from 1.5 to 4 pounds (0.75-2 lbs. metallic copper) per acre. Begin applications in the spring at the initiation of new growth and repeat at 7- to 30-day intervals if needed. Use the higher rates when disease pressure is severe or when environmental conditions favor disease development. Maximum annual rate per acre is 40 pounds of product (20 pounds metallic copper).

Kocide® 50DF is registered for use on the listed conifers for control of the following diseases.

Crop	Scientific Name	Disease
Douglas Fir	*Pseudotsuga menziesii*	Rhabdocline Needlecast
Fir	*Abies* spp.	Needlecasts
Juniper	*Juniperus* spp.	Anthracnose, Phomopsis Twig Dieback
Leyland Cypress	*X Cupressocyparis leylandii*	Cercospora Needle Blight
Pine	*Pinus* spp.	Needlecasts
Spruce	*Picea* spp.	Needlecasts

Lichens: To control lichens on any of the conifers above, apply 3 to 4 pounds of Kocide® 50DF per acre 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.

RESTRICTION:

- Do not buffer or combine with emulsifiable concentrate insecticides.
- Minimum retreatment interval is 7 days.
- Maximum single application rate is 4.0 lbs./A (2.0 lbs. metallic copper equivalent).
- Do not apply more than a maximum 40 lbs. of product (20 lbs. metallic copper) per acre per year.
- Do not make more than 10 applications per year at the maximum single application rate.

GREENHOUSE AND SHADEHOUSE CROPS

Notice to User: Kocide® 50DF may be used in greenhouses and shadehouses to control diseases on crops which appear on this label, and specific instructions have been developed for the crops listed. The grower should bear in mind that the sensitivity of crops grown in greenhouses and shadehouses differs greatly from crops grown under field conditions. Neither the manufacturer nor seller has determined whether or not Kocide® 50DF can be used safely on all greenhouse and shadehouse grown crops. The user must determine if Kocide® 50DF can be used safely prior to commercial use. In a small area, apply the specified rates to the plants in question, e.g., foliage, fruit, etc., and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use. Consequently, injuries arising from the use of Kocide® 50DF on these types of greenhouse and shadehouse crops are the responsibility of the user.

Apply Kocide® 50DF according to specific rates given for those crops in pounds per acre. **Two level tablespoons of Kocide® 50DF per 1,000 square feet is equivalent to 1.56 pounds of product per acre.** Apply Kocide® 50DF in adequate water for thorough coverage of plant parts. Begin application at first sign of disease and repeat if needed; use shorter spray intervals during periods when severe disease conditions persist. For maximum annual rates per acre, refer to the crop specific directions.

IMPORTANT: Phytotoxicity may occur on young tender flush when Kocide® 50DF is applied to citrus seedlings grown in greenhouses or shadehouses.

Crop	Disease	Rate per 1,000 Sq. Ft.	Use Instructions
Citrus (Non-Bearing Nursery)	Brown Rot, Citrus Canker, Greasy Spot, Melanose, Pink Pitting, Scab	8 TBSP. *(3.12 lbs. metallic copper per acre)*	Begin applications when disease first threatens. Repeat at 7- to 30-day intervals if needed depending on disease severity. **Restrictions:** • Do not make more than 4 applications per year at the maximum single application rate. • Maximum annual rate is 25.2 lbs./A (12.6 lbs. metallic copper equivalent). • Maximum single application rate is 8 TBSP (3.12 lbs. metallic copper equivalent). • The minimum interval between treatments is 7 days.
Cucumber	Angular Leaf Spot, Downy Mildew	2.5 TBSP. *(1.05 lbs. metallic copper per acre)*	Apply at 5- to 7-day intervals when plants begin to vine. **Restrictions:** • Do not make more than 5 applications per year at the maximum single

			application rate. • Maximum annual rate is 10.5 lbs./A (5.25 lbs. metallic copper equivalent). • Maximum single application rate is 2.5 TBSP (1.05 lbs. metallic copper equivalent). • The minimum interval between treatments is 5 days.
Eggplant	Alternaria Blight, Anthracnose, Phomopsis	2 TBSP. *(0.78 lbs. metallic copper per acre)*	Begin applications prior to development of disease symptoms. Repeat sprays at 7- to 10-day intervals if needed depending on disease severity. **Restrictions:** • Do not make more than 10 applications per year at the maximum single application rate. • Maximum annual rate is 15.8 lbs./A (7.9 lbs. metallic copper equivalent). • Maximum single application rate is 2 TBSP (0.78 lbs. metallic copper equivalent). • The minimum interval between treatments is 7 days.
Pepper	Bacterial Spot	2 TBSP. *(0.78 lbs. metallic copper per acre)*	Begin applications when conditions first favor disease development and repeat at 3- to 10-day intervals if needed depending on disease severity.

			Restrictions: • Do not make more than 15 applications per year at the maximum single application rate. • Maximum annual rate is 23.7 lbs./A (11.9 lbs. metallic copper equivalent). • Maximum single application rate is 2 TBSP (0.78 lbs. metallic copper equivalent). • The minimum interval between treatments is 3 days.
Tomato (fresh market)	Anthracnose, Bacterial Speck, Bacterial Spot, Early Blight, Gray Leaf Mold, Late Blight, Septoria Leaf Spot	1.25 TBSP. *(0.53 lbs. metallic copper per acre)*	Begin applications when disease first threatens and repeat at 3- to 10-day intervals if needed depending on disease severity. **Restrictions:** • Do not make more than 12 applications per year at the maximum single application rate. • Maximum annual rate is 16.0 lbs./A (8.0 lbs. metallic copper equivalent). • Maximum single application rate is 1.25 TBSP (0.53 lbs. metallic copper equivalent). • The minimum interval between treatments is 3 days.

ORNAMENTALS

Use Kocide® 50DF for control of bacterial and fungal diseases of foliage, flowers and stems on ornamentals in greenhouses, shade houses, outdoor nurseries and outdoor landscape plantings.

For ornamental crops in dormancy, apply as a thorough cover spray at rates ranging from 1.0 to 4.0 pounds (0.5-2 lbs. metallic copper) per acre of Kocide® 50DF. When new growth is present, apply as a thorough cover spray at rates ranging from 1.0 to 2.0 pounds (0.5-1 lbs. metallic copper) per acre of Kocide® 50DF. **Two level tablespoons of Kocide® 50DF per 1,000 square feet is equivalent to 1.56 pounds of product per acre.** Begin application at first sign of disease and repeat at 7- to 14-day intervals if needed; use the higher rates and shorter spray intervals during periods of frequent rains or when severe disease conditions persist. Maximum annual rate per acre is 40 pounds (20 lbs. metallic copper).

Kocide® 50DF may be used alone or in combination with other fungicides registered for use on ornamentals as a maintenance spray. Use in accordance with the most restrictive of label limitations and precautions. Do not exceed label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing.

Notice to User: Plant sensitivities to Kocide® 50DF have been found to be acceptable for the specific genera and species listed on this label under the conditions tested. However, phytotoxicity may occur. Due to the large number of species and varieties of ornamental and nursery plants, and the wide range of growing conditions, it is impossible to test every one for sensitivity to Kocide® 50DF. Neither the manufacturer nor seller has determined whether or not Kocide® 50DF can be safely used on ornamental or nursery plants not listed on this label. The user must determine if Kocide® 50DF can be used safely prior to commercial use. In a small area, apply the specified rates to the plants in question, i.e., bedding plants, foliage, etc., and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use.

Restrictions:

- Minimum retreatment interval is 7 days.
- Maximum annual rate for Easter Lilies is 75 lbs. metallic copper. If used at this rate for Easter Lilies, do not add any additional copper pesticides to this land for 36 months.
- Maximum single application rate is 4.0 lbs./A (2.0 lbs. metallic copper equivalent).
- Maximum annual rate for Ornamentals (except Easter Lilies) is 20 lbs. metallic copper.
- This product may be reactive on masonry and metal surfaces including galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.
- Do not make more than 37 applications per year at the maximum single application rate for Easter Lilies.
- Do not make more than 10 applications per year at the maximum single application rate for Ornamentals (except Easter Lilies).

Crop	Scientific Name	Disease
Aglaonema*	*Aglaonema* spp.	Bacterial Leaf Spot
Althea (Rose of Sharon)	*Hibiscus syriacus*	Bacterial Leaf Spot
Andromeda, Japanese*	*Pieris japonica*	Leaf Spots, Twig Blight
Aralia	*Dizygotheca elegantissima*	Alternaria, Cercospora Leaf Spot, Xanthomonas Leaf Spot
Arborvitae	*Thuja* spp.	Alternaria Twig Blight, Cercospora Leaf Blight
Aster*	*Aster* spp.	Downy Mildew, Leaf Spots
Azalea[1]	*Rhododendron* spp.	Botrytis Blight, Cercospora Leaf Spot, Phytophthora Dieback, Powdery Mildew

Beech*	*Fagus* spp.	Leaf Spots
Begonia	*Begonia semperflorens*	Bacterial Leaf Spot (*Erwinia* spp., *Pseudomonas* spp., *Xanthomonas* spp.)
Bougainvillea	*Bougainvillea spectabilis*	Anthracnose, Bacterial Leaf Spot
Boxwood*	*Buxus spp.*	Leaf Spots
Camellia	*Camellia japonica, C. sasanqua*	Anthracnose, Bacterial Leaf Spot
Camphor Tree	*Cinnamomum camphora*	Pseudomonas Leaf Spot
Canna	*Canna* spp.	Pseudomonas Leaf Spot
Carnation[1]	*Dianthus* spp.	Alternaria Blight, Botrytis Blight, Pseudomonas Leaf Spot
Cedar*	*Cedrus* spp.	Tip Blight
Cherry, Nanking*	*Prunus tomentosa*	Bacterial Leaf Spot
Chinese Tallow Tree	*Sapium sebiferum*	Bacterial Leaf Spot (*Pseudomonas* spp., *Xanthomonas* spp.)
Chrysanthemum[1]	*Chrysanthemum morifolium*	Botrytis Blight, Pseudomonas Leaf Spot, Septoria Leaf Spot
Cotoneaster	*Cotoneaster* spp.	Botrytis Blight
Crabapple*	*Malus* spp.	Fire Blight
Cypress*	*Cupressus* spp.	Twig Blight
Dahlia	*Dahlia pinnata*	Alternaria Leaf Spot, Botrytis Gray Mold, Cercospora Leaf Spot
Delphinium*	*Delphinium* spp.	Leaf Spots
Dianthus	*Dianthus* spp.	Bacterial Soft Rot, Bacterial Spot
Dogwood, Flowering	*Cornus florida*	Anthracnose
Dogwood, Kousa*	*Cornus kousa*	Fungal Leaf Spots
Douglas Fir	*Pseudotsuga menziesii*	Rhabdocline Needlecast
Dracaena*	*Dracaena marginata*	Bacterial Leaf Spot
Dumb Cane*	*Dieffenbachia* spp.	Bacterial Leaf Spot
Dusty Miller	*Senecio cineraria*	Bacterial Leaf Spot (*Pseudomonas cichorii*)
Echinacea	*Echinacea* spp.	Bacterial Leaf Spot (*Pseudomonas cichorii*)
Elm, Chinese	*Ulmus parvifolia*	Xanthomonas Leaf Spot
Euonymus	*Euonymus* spp.	Anthracnose, Botrytis Blight
Fern Boston*	*Nephrolepis exaltata*	Bacterial Leaf Spot
Fern, Holly	*Cyrtomium falcatum*	Pseudomonas Leaf Spot
Fig, Weeping*	*Ficus benjamina*	Bacterial Leaf Spot
Filbert (Ornamental)*	*Corylus* spp.	Filbert Blight
Fir*	*Abies* spp.	Needlecasts
Gardenia	*Gardenia jasminoides*	Alternaria Leaf Spot, Botrytis Bud Rot, Cercospora Leaf Spot
Geranium	*Pelargonium* spp.	Alternaria Leaf Spot, Botrytis Gray Mold, Cercospora Leaf Spot

Gladiola	*Gladiolus* spp.	Alternaria Leaf Spot, Anthracnose, Bacterial Leaf Blight, Botrytis Gray Mold
Golden Rain Tree	*Koelreuteria paniculata*	Bacterial Leaf Spot
Grape Ivy*	*Cissus* spp.	Bacterial Leaf Spot
Hawthorn*	*Crataegus* spp.	Fire Blight
Hibiscus[2]	*Hibiscus* spp.	Bacterial Leaf Spot
Holly*	*Ilex* spp.	Bacterial Blight, Leaf Spots
Honeylocust*	*Gleditsia triacanthos*	Bacterial Leaf Spot
Honeysuckle, Tatarian*	*Lonicera tatarica*	Bacterial Leaf Spot
Impatiens	*Impatiens sallerana*	Bacterial Leaf Spot
Indian Hawthorn[3]	*Raphiolepis indica*	Anthracnose, Entomosporium Leaf Spot
Iris[4]*	*Iris* spp.	Bacterial Leaf Spot
Ivy (English, Algerian)[1]	*Hedera helix, H. canariensis*	Xanthomonas Leaf Spot
Ixora	*Ixora coccinea*	Xanthomonas Leaf Spot
Juniper	*Juniperus* spp.	Anthracnose, Phomopsis Twig Dieback*
Lantana	*Lantana camera*	Bacterial Leaf Spot
Leyland Cypress*	*X Cupressocyparis leylandii*	Cercospora Needle Blight
Lilac	*Syringa* spp.	Cercospora Leaf Spot, Pseudomonas Blight*
Lily, Easter[5]	*Lilium longiflorum*	Botrytis Blight
Linden*	*Tilia* spp.	Anthracnose, Leaf Blight
Loblolly Bay	*Gordonia lasianthus*	Anthracnose
Loquat	*Eriobotrya japonica*	*Colletotrichum* spp., *Entomosporium maculata*
Magnolia (Southern)	*Magnolia grandiflora*	Algal Leaf Spot, Anthracnose, Bacterial Leaf Spot
Magnolia (Sweet Bay)	*Magnolia virginiana*	Anthracnose
Magnolia (Oriental)	*Magnolia soulangiana*	Bacterial Leaf Spot
Mandevilla	*Mandevilla* spp.	Anthracnose
Maple*	*Acer* spp.	Pseudomonas Leaf Blight
Marigold	*Tagetes* spp.	Alternaria Leaf Spot, Botrytis Leaf Rot, Cercospora Leaf Spot, Flower Rot
Mountain-Ash*	*Sorbus* spp.	Fire Blight
Mulberry, Contorted*	*Morus bombycis*	Bacterial Leaf Spot
Mulberry, Weeping	*Morus alba*	Bacterial Leaf Spot
Narcissus*	*Narcissus* spp.	Leaf Blight
Nephthytis*	*Syngonium podophyllum*	Bacterial Leaf Spot
Oak*	*Quercus* spp.	Leaf Spots
Oak, Laurel	*Quercus laurifolia*	Algal Leaf Spot (*Cephaleuros virescens*)
Oleander	*Nerium oleander*	Bacterial Leaf Spot, Fungal Leaf Spot
Oregon Grapeholly*	*Mahonia aquifolium*	Leaf Spots
Pachysandra	*Pachysandra procumbens*	Volutella Leaf Blight
Palm, Date	*Phoenix canariensis*	Pestalotia Leaf Spot
Palm, European Fan	*Chamaerops humilis*	Pestalotia Leaf Spot
Palm, Parlor*	*Chamaedorea elegans*	Bacterial Leaf Spot

Palm, Queen	*Arecastrum romanzoffianum*	Exosporium Leaf Spot, Phytophthora Bud Rot
Palm, Washingtonia	*Washingtonia robusta*	Pestalotia Leaf Spot
Peach (Flowering)[6]*	*Prunus* spp.	Bacterial Blast, Brown Rot, Fire Blight
Pear (Flowering)	*Pyrus calleryana*	Fire Blight, Leaf Spots
Pentas (Egyptian Star)	*Pentas* spp.	Bacterial Leaf Spot (*Pseudomonas* spp.*, *Xanthomonas* spp.)
Peony	*Paeonia* spp.	Botrytis Blight
Periwinkle	*Catharanthus roseus, Vinca* spp.	Phomopsis Stem Blight
Philodendron	*Philodendron selloum*	Bacterial Leaf Spot
Phlox	*Phlox* spp.	Alternaria Leaf Spot
Photinia (Red Tip)	*Photinia x fraseri, P. glabra*	Anthracnose, Entomosporium Leaf Spot
Pine*	*Pinus* spp.	Needlecasts
Pistachio	*Pistacia chinensis*	Anthracnose
Plantain Lily[4]	*Hosta* spp.	Bacterial Leaf Spot
Plum (Flowering)[6]*	*Prunus* spp.	Bacterial Blast, Brown Rot, Fire Blight
Pothos*	*Scindapsus* spp.	Bacterial Leaf Spot
Powder Puff Plant	*Calliandra* spp.	Bacterial Leaf Spot
Pyracantha	*Pyracantha* spp.	Fire Blight, Scab
Rhododendron	*Rhododendron* spp.	Alternaria Flower Spot
Rose[1]	*Rosa* spp.	Black Spot, Powdery Mildew
Snapdragon	*Antirrhinum majus*	Anthracnose, Dieback, Downy Mildew
Spathe Flower*	*Spathiphyllum* spp.	Bacterial Leaf Spot
Spirea*	*Spiraea* spp.	Fire Blight
Spruce*	*Picea* spp.	Needlecasts
Sycamore	*Platanus* spp.	Anthracnose, Leaf Spots*
Tulip	*Tulipa* spp.	Anthracnose, Botrytis Blight
Umbrella Tree*	*Schefflera* spp.	Bacterial Leaf Spot
Verbena	*Verbena* spp.	Xanthomonas Leaf Spot
Viburnum	*Viburnum odoratissimum, V. plicatum, V. suspensum*	Anthracnose
Viola (Pansy, Violet)	*Viola* spp.	Downy Mildew
Willow	*Salix* spp.	Anthracnose
Yew*	*Taxus* spp.	Needle Blight
Yucca (Adam's Needle)	*Yucca* spp.	Cercospora Leaf Spot, Septoria Leaf Spot
Zinnia*	*Zinnia* spp.	Leaf Spots

[1] Discoloration of foliage and/or blooms have been noted on some varieties. To prevent residues on commercial plants, do not spray immediately before selling season.
[2] Hibiscus - Do not apply to plants in flower.
[3] For Indian Hawthorn use 2 to 3 pounds per acre.
[4] Some cultivars may be sensitive to Kocide® 50DF.
[5] Apply Kocide® 50DF at 3.0 – 5.0 pounds per acre (1.5-2.5 pounds metallic copper). Maximum annual rate per acre is 150 pounds (75 lbs. metallic copper). Do not apply any additional copper pesticide to this land for 36 months. Minimum retreatment interval is 7 days.
[6] Apply dormant through bloom only.

IMPORTANT: Phytotoxicity may depend on varietal differences. If unfamiliar with the use of Kocide® 50DF, apply the specified rate to a few plants and observe after 7 to 10 days for symptoms of phytotoxicity.

Control of Ball Moss*, Spanish Moss* and Lichens* on Ornamental and Shade Trees: Apply Kocide® 50DF in early spring when the trees are dormant. Apply 3 to 4 pounds of Kocide® 50DF in 100 gallons of water, using 1.5 gallons of spray per foot of tree height. Be sure to thoroughly wet ball moss tufts, Spanish moss or lichens. The addition of a non-ionic surfactant will improve control. A second application may be required after 12 months.

IMPORTANT: Kocide® 50DF may be injurious to some ornamental plants growing beneath the trees.

Cold Storage Protection for Dormant Rootstock*: To protect bare-root nursery trees from Phytophthora Crown Rot and Botrytis, use 1.5 to 2 pounds of Kocide® 50DF per 100 gallons of water. Apply as a dip or spray to the roots and lower stems of dormant rootstock prior to placing in cold storage. Do not apply to rootstock less than 2 years old.
*Not registered for use in California.

TURF

For control of algae in turfgrasses on sod farms, golf courses, cemeteries, and industrial turf areas. Apply 3 to 6 pounds (1.5-3 lbs. metallic copper) per acre (1.1 to 2.2 oz. per 1,000 square feet). Apply in sufficient water to provide adequate coverage. Kocide® 50DF may be used alone or in combination with other registered turf fungicides as a maintenance spray. Observe all precautions and limitations on the label of each product used in tank mixes.

Restrictions:

- Minimum retreatment interval is 10 days.
- Maximum single application rate is 6 pounds per acre (3 pounds metallic copper equivalent).
- Maximum single application rate is 6 pounds per acre (3 pounds metallic copper equivalent).
- Maximum annual application rate is 42 pounds per acre (21 pounds metallic copper equivalent).
- Do not make more than 7 applications per year at the maximum single application rate.
- Phytotoxicity may occur depending on varietal differences. Apply the specified rate to a small area and observe for 7 to 10 days for signs of injury. If phytotoxicity occurs, discontinue use. Do not apply in spray solutions with a pH of less than 6.5.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place 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: (Paper Bag or Plastic Bag)
Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. When completely empty, offer for recycling if available, or dispose of bag in a sanitary landfill.

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