

# Kocide® HCU

## AGRICULTURAL USE REQUIREMENTS (continued)

For Greenhouse Use 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, such as refraining from rubbing their eyes, to keep the residues out of their eyes
  - that if they do get residues in their eyes, they should immediately flush their eyes with the eye flush container or eye flush station that is located with the decontamination supplies
  - how to operate the eye flush container or eye flush station.

\*Metallic Copper (Cu<sup>2+</sup>) Equivalent, 50.1% by weight <sup>1</sup>CAS No. 20427-52-9

**Active Ingredient:** Copper Hydroxide\* ..... 77.0%  
 Other Ingredients: ..... 23.0%  
**Total:** ..... 100.0%  
 \*Metallic Copper (Cu<sup>2+</sup>) Equivalent, 50.1% by weight <sup>1</sup>CAS No. 20427-52-9

## KEEP OUT OF REACH OF CHILDREN DANGER - PELIGRO

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

EPA Reg. No. 91411-12-70051 EPA Est. No. 91411-TX-1  
 Nonferrous Container

Net: 20 lb. (9.07 kg)

AZ0170209  
 ESL 20170621

**Kocide®**  
 Manufactured for: Certis USA LLC  
 9145 Gullford Road, Suite 175  
 Columbia, MD 21046

**CERTIS**

FIRST AID				
<b>If In Eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>			
<b>If Swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>			
<b>If On Skin Or Clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>			
<b>If Inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call poison control center or doctor for treatment advice.</li> </ul>			
HOT LINE NUMBER				
<p>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.</p> <p>Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.</p> <p>See side/back panels for additional precautionary statements</p>				
PRECAUTIONARY STATEMENTS				
HAZARDS TO HUMANS AND DOMESTIC ANIMALS				
DANGER-PELIGRO				
<p>Corrosive. Causes irreversible eye damage. Do not get in eyes, skin, or clothing. Harmful if swallowed or absorbed through skin. Harmful if inhaled. Avoid contact with skin. Avoid breathing vapor or spray mist.</p>				
PERSONAL PROTECTIVE EQUIPMENT (PPE)				
<p>Mixers, loaders, applicators and other handlers must wear:</p> <ul style="list-style-type: none"> <li>• Long-sleeved shirt</li> <li>• Long pants</li> <li>• Shoes and socks</li> <li>• Chemical resistant gloves made of any waterproof material</li> <li>• Protective eyewear</li> </ul> <p>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.</p>				
ENGINEERING CONTROLS:				
<p>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.</p>				
USER SAFETY RECOMMENDATIONS				
<p>Users Should:</p> <ul style="list-style-type: none"> <li>• Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.</li> <li>• Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.</li> <li>• 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.</li> </ul>				
ENVIRONMENTAL HAZARDS				
<p>This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.</p> <p>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.</p>				
DIRECTIONS FOR USE				
<p>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.</p>				
AGRICULTURAL USE REQUIREMENTS				
<p>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 users of this product that are covered by the Worker Protection Standard.</p> <p>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours without required PPE.</p> <p>PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:</p> <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical resistant gloves made of any waterproof material</li> <li>• Shoes plus socks</li> <li>• Protective eyewear</li> </ul> <p>(continued)</p>				
CITRUS: Grapefruit, Kumquat, Lemon, Lime, Orange, Pummelo, Tangelo and Tangerine				
<p>KOCID<sup>®</sup> HCU may be mixed with dry foliar nutritional (micronutrients) to create "Shot Bag" mixes to meet the various nutritional requirements of citrus and provide disease protection as described on this label. KOCID<sup>®</sup> HCU per acre rates in these mixes must not exceed the maximum labeled rates for disease control.</p> <p>Adding foliar nutritional or other products to spray mixtures containing KOCID<sup>®</sup> HCU and applying to citrus during the post bloom period when young fruit are present may result in spray burn.</p>				
Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions	
Algal Spot, Melonose, Scab	3 – 6.3 lb.	25.1 lb.	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	3 – 6.3 lb.	25.1 lb.	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 lb.	25.1 lb.	On susceptible varieties apply when the first spring flush appears and each flush thereafter. Application to fruit should start after two thirds of the petals have fallen and be repeated on a 7 to 21 day schedule if needed. Use the higher rates when conditions favor disease. Minimum retreatment interval is 7 days.	
Phytophthora Brown Rot, Septoria Spot	4 – 6.3 lb.	25.1 lb.	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. <b>NOTE:</b> In California, in areas subject to copper injury, add 0.25 to 0.5 pound of high quality lime per pound of KOCID <sup>®</sup> HCU.	
Phytophthora Foot Rot	1 lb.	25.1 lb.	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 infection. <b>NOTE:</b> Areas where microjet or low volume irrigation hit the tree trunk may require retreatment due to wash off.	
Citrus Canker (suppression)	6.3 lb.	25.1 lb.	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 lb.	25.1 lb.	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.	
<b>NOTE:</b> Phytotoxicity may occur on young tender flush when KOCID <sup>®</sup> HCU is applied to citrus seedlings grown in greenhouses or shadehouses.				
*Not registered for use in California.				
CITRUS Field Nursery Grown				
To control Melonose, Scab, Pink Pitting, Greasy Spot, Brown Rot and for suppression of Citrus Canker, apply 4 to 6.3 pounds of KOCID <sup>®</sup> HCU per acre. Apply KOCID <sup>®</sup> HCU at 28 day intervals if needed depending on disease severity. Minimum retreatment interval is 7 days. Maximum Annual Rate/Acre is 25.1 lbs.				
FIELD CROPS				
Crop	Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions
Alfalfa	Cercospora Leaf Spot, Leptosphaeria Leaf Spot	1 lb.	2.24 lb.	Apply 10 to 14 days before each harvest or earlier if disease threatens. Minimum retreatment interval is 30 days. <b>NOTE:</b> Spray injury may occur with sensitive varieties such as Lahontan.
Corn (Field Corn, Popcorn, Seed Corn, Sweet Corn)	Bacterial Stalk Rot	1 – 2 lb.	8.4 lb.	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. Minimum retreatment interval is 7 days.
Peanut	Cercospora Leaf Spot	1.5 lb.	9.46 lb.	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. Minimum retreatment interval is 7 days.
Potato	Early Blight, Late Blight	1 – 4 lb.	50 lb.	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 KOCID <sup>®</sup> HCU 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. <b>NOTE:</b> 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. Minimum retreatment interval is 7 days.
Soybean*	Bacterial Blight, Downy Mildew	1 – 1.5 lb.	9.48 lb.	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. Minimum retreatment interval is 7 days.
Sugar Beet	Cercospora Leaf Spot	2 – 2.5 lb.	15.7 lb.	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. Minimum retreatment interval is 10 days.
Wheat, Barley, Oats	Fusarium Head Blight Suppression*, Helminthosporium Spot Blotch, Powdery Mildew Suppression	1 lb.	2.12 lb.	Make applications for early season disease control through heading. Use higher rates when conditions favor disease. Add an adjuvant. Minimum retreatment interval is 10 days.
*Not registered for use in California.				
SMALL FRUITS				
Crop	Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions
Blackberry (Auroa, Boychen, Cascade, Copenhaven, Chesham, Logan, Marion, Santiam, Thornless Evergreen)	Anthracoze, Cane Spot, Leaf Spot, Pseudomonas Blight, Purple Blotch, Yellow Rust	4 lb.	20 lb.	Make fall application after harvest. Apply delayed dormant spray after pruning/training in the spring. If needed, agricultural-type spray oil may be added.
	Anthracoze, Cane Spot, Leaf Spot, Purple Blotch, Yellow Rust	2 lb.	20 lb.	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. <b>NOTE:</b> Crop injury may occur if applied to foliage under certain environmental conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear. Minimum retreatment interval is 7 days.
Blueberry	Bacterial Canker	3 – 4 lb.	16.8 lb.	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 lb.	16.8 lb.	Dormant Application: Begin applications when bloom buds begin to swell. Make additional applications at 7 to 14 day intervals if needed before blooms open. Minimum retreatment interval is 7 days.
(continued)				
SMALL FRUITS (continued)				
Crop	Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions
Cranberry	Fruit Rot	4.2 lb.	25.1 lb.	Make first application in late bloom. Apply one or two additional applications at 7 to 14 day intervals if needed depending on disease severity. Minimum retreatment interval is 7 days.
	Rose Bloom	4.2 lb.	25.1 lb.	Apply three sprays on 7 to 14 day schedule if needed as soon as symptoms are observed. Minimum retreatment interval is 7 days.
	Bacterial Stem Canker	4.2 lb.	25.1 lb.	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. Minimum retreatment interval is 7 days.
	Leaf Blight, Red Leaf Spot, Stem Blight, Tip Blight (Monilia)	4.2 lb.	25.1 lb.	Apply delayed dormant spray in the spring. Repeat at 7 to 14 day intervals if needed through pre-bloom. Minimum retreatment interval is 7 days.
Currant, Gooseberry	Anthracoze, Leaf Spot	5 lb.	20 lb.	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. Minimum retreatment interval is 10 days.
Raspberry	Anthracoze, Cane Spot, Leaf Spot, Pseudomonas Blight, Purple Blotch, Yellow Rust	4 lb.	20 lb.	Make fall application after harvest. Apply delayed dormant spray after training in the spring. If needed, agricultural-type spray oil may be added.
	Anthracoze, Cane Spot, Leaf Spot, Purple Blotch, Yellow Rust	2 lb.	20 lb.	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. <b>NOTE:</b> Crop injury may occur if applied to foliage under certain environmental conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear. Minimum retreatment interval is 7 days.
Strawberry	Angular Leaf Spot (Xanthomonas), Leaf Blight, Leaf Scorch, Leaf Spot	2 – 3 lb.	16.3 lb.	Begin application when plants are established and continue on a weekly schedule throughout the season. Apply in at least 20 gallons of water. Use the higher rates when conditions favor disease. <b>NOTE:</b> Discontinue applications if signs of crop injury appear. Minimum retreatment interval is 7 days.
TREE CROPS				
Crop	Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions
Almond only	Bacterial Blast	1 – 3 lb.	35.9 lb.	For bacterial blast control in sprinkler irrigated orchards or where disease is severe, apply 1.0 pounds per acre post-bloom at 2 week intervals if needed or just before sprinkling. <b>Dormant:</b> Make first application at late dormant. Use the higher rates when conditions favor disease. <b>Pink through full bloom:</b> Maximum use rate is 2.0 pounds. <b>Petal Fall:</b> Maximum use rate is 1.0 pounds. <b>Post Petal Fall:</b> Maximum use rate is 0.5 pounds. Time sprays around rain events and temperature. Make a minimum of one application to prevent new infections. <b>Note:</b> Copper applied after bloom can be potentially phytotoxic. Leaf spotting and premature leaf fall can occur if rates are extended. Minimum retreatment interval is 5 days.
Almond only	Bacterial Spot (Xanthomonas arboricola pv. Pruni)	8 – 16 lb. 0.5 – 2 lb.	35.9 lb.	Apply before full bloom. Do not apply after full bloom or injury may occur. Use the higher rates when rainfall is heavy and disease pressure is high. Minimum retreatment interval is 5 days.
Almond, Apricot, Cherry, Plum, Prune	Bacterial Blast (Pseudomonas), Bacterial Canker, Coryneum Blight (Shot Hole)	8 – 16 lb.	35.9 lb.	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. <b>For Cherries:</b> Where disease is severe, an additional application shortly after harvest may be required. <b>NOTE:</b> Foliar injury may occur from post-bloom sprays on almonds, especially on NePlus varieties. 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. Minimum retreatment interval is 5 days.
	Blossom Brown Rot, Coryneum Blight (Shot Hole)	3 lb. (Almond) (All Others) 2 – 3 lb.	35.9 lb.	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. Minimum retreatment interval is 5 days.
	Black Knot (Plum)	2 – 3 lb.	35.9 lb.	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. Minimum retreatment interval is 5 days. <b>NOTE:</b> To avoid plant injury, do not use after full bloom.
	Cherry Leaf Spot (Sour Cherries Only)	3 lb.	35.9 lb.	Apply at petal fall as well as 1 to 2 weeks after petal fall. Do not apply to sweet cherry or the English Morello variety as severe injury will result. The addition of 1 to 5 pounds of hydrated lime per acre of KOCID <sup>®</sup> HCU may reduce crop injury. Minimum retreatment interval is 5 days. <b>NOTE:</b> Moderate to severe injury such as leaf spotting and defoliation may occur from post-bloom applications.
Apple	Anthracoze, Blossom Blight, European Canker (Nectria Shot Hole) (Pseudomonas)	12 – 16 lb.	31.9 lb.	Apply before fall rains. Use the higher rates when conditions favor disease. <b>NOTE:</b> Use on yellow varieties may cause discoloration. To avoid discoloration, pick before spraying. Only one dormant application allowed per year.
	Apple Scab, Fire Blight	4 – 12 lb.	31.9 lb.	Make application between silver-tip and green-tip. Apply as a full cover spray for early season disease suppression. <b>NOTE:</b> Moderate to severe crop injury may occur from late application; discontinue use when green- tip reaches 1/2 inch. Only one application allowed per year.
	Apple Scab	1 lb.	31.9 lb.	Extended spray schedule where fruit finish is not a concern. Continued applications may be made at 5 to 7 day intervals if needed between 1.2 inch green- tip and first cover spray. <b>NOTE:</b> 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 is a concern as it is likely to cause fruit russetting. The addition of 1 to 3 pounds of hydrated lime per pound of KOCID <sup>®</sup> HCU may reduce crop injury. Minimum retreatment interval is 5 days.
	Fire Blight	1.3 lb.	31.9 lb.	Apply before full bloom and again during dormancy before spring growth starts. Use the higher rates (Pseudomonas) when conditions favor disease development. Minimum retreatment interval is 30 days.
	Collar Rot, Crown Rot	4 lb.	31.9 lb.	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. <b>NOTE:</b> Do not use if soil pH is below 5.5 since copper toxicity may occur.
Avocado	Anthracoze, Blotch, Scab	4 – 6.3 lb.	37.7 lb.	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. Minimum retreatment interval is 14 days.
Banana, Plantain	Sigatoka (Black and Yellow)	2.1 lb.	37.7 lb.	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 21 day intervals during dry periods. Minimum retreatment interval is 7 days.
	Black Pitting	2.1 lb.	37.7 lb.	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. Minimum retreatment interval is 7 days.
Cacao	Black Pod	2 – 4.5 lb.	31.4 lb.	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 per acre according to disease incidence and planting density. Minimum retreatment interval is 14 days.
Coffee	Coffee Berry Disease (Colletotrichum coffeanum)	4.2 lb.	25.1 lb.	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)	4.2 lb.	25.1 lb.	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 lb.	25.1 lb.	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. Minimum retreatment interval is 14 days.
	Iron Spot (Cercospora coffeicola), Pink Disease (Corticium salmoneicolor)	2 lb.	25.1 lb.	Use concentrate or dilute spray. Begin treatment at the start of wet season and continue at monthly intervals for three applications.
Filbert (only for use in Washington & Oregon)	Bacterial Blight	8 – 12 lb.	47.9 lb.	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	8 – 12 lb.	47.9 lb.	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 slicking agent may be added. Minimum retreatment interval is 14 days.
Mango	Anthracoze	4 – 6.4 lb.	95.8 lb.	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. Minimum retreatment interval is 7 days.
Olive	Olive Knot, Peacock Spot	5 – 8 lb.	35.9 lb.	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. Minimum retreatment interval is 30 days.
	Bacterial Blast (Pseudomonas), Bacterial Canker, Bacterial Spot (Xanthomonas), Coryneum Blight (Shot Hole), Leaf Curl	8 – 16 lb.	35.9 lb.	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.
	Blossom Brown Rot, Coryneum Blight (Shot Hole), Leaf Curl	3 – 6 lb.	35.9 lb.	Full cover spray at pink bud. Use the higher rates when conditions favor disease. Minimum retreatment interval is 5 days.
	Bacterial Spot	1 – 3 lb.	35.9 lb.	Apply as a post bloom cover spray. Repeat at 5 day intervals if needed. Minimum retreatment interval is 5 days. <b>NOTE:</b> Do not spray three weeks prior to harvest. <b>Spotting of leaves and defoliation may occur from use in cover sprays. Discontinue use if injury occurs.</b> *Maximum single growing season application is 3.0 pounds per acre.
Pear	Fire Blight	1 lb.	31.9 lb.	Apply at 5 day intervals if needed throughout the bloom period. Minimum retreatment interval is 5 days. <b>NOTE:</b> Russetting may occur in copper sensitive varieties. Excessive dosages may cause fruit russet on any variety.
	Blossom Blast (Pseudomonas)	9 – 16 lb.	31.9 lb.	Apply before fall rains and again during dormancy before spring growth starts. Use the higher rates (Pseudomonas) when conditions favor disease development. Minimum retreatment interval is 30 days.
Pecan	Kamel Rot, Shuck Rot (Phytophthora cactorum), Zonate Leaf Spot (Cristulariella pyramidalis)	2 – 4.2 lb.	16.8 lb.	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. Minimum retreatment interval is 14 days.
	Ball Moss, Spanish Moss	2 – 4.2 lb.	16.8 lb.	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 fully through. The addition of a non-toxic surfactant will improve control. A second application may be required after 12 months.
Pistachio	Phytophthora Panicle and Shoot Blight, Botrytis Blight, Late Blight (Alternaria alternata), Septoria Leaf Blight	3 – 4.2 lb.	16.8 lb.	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. Minimum retreatment interval is 14 days.
Quince	Fire Blight	1 lb.	31.9 lb.	Apply at 5 day intervals if needed throughout the bloom period. Apply in adequate water for thorough coverage. Minimum retreatment interval is 5 days.
Walnut	Walnut Blight	5 – 8 lb.	63.9 lb.	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. Minimum retreatment interval is 7 days. <b>NOTE:</b> Adequate control may not be obtained when copper tolerant species of Xanthomonas bacteria are present.
VEGETABLES				
Crop	Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions
Bean (Dry, Green)	Brown Spot, Common Blight, Halo Blight	1 – 1.5 lb.	9.46 lb.	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. Minimum retreatment interval is 7 days.
Beet (Table Beet, Beet Greens)	Cercospora Leaf Spot	2 – 2.5 lb.	15 lb.	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. Minimum retreatment interval is 10 days.
Carrot	Alternaria Leaf Spot, Cercospora Leaf Spot	2 lb.	9.98 lb.	Begin applications when disease first threatens and repeat at 7 to 14 day intervals if needed depending on disease severity. Minimum retreatment interval is 7 days.
Celery, Celertac	Bacterial Blight, Cercospora Early Blight, Septoria Late Blight	2 lb.	10.6 lb.	Begin applications as soon as plants are first established in the field, repeating at 7day intervals if needed depending on disease severity and environmental conditions.
Crucifers (Broccoli, Brussels Sprout, Cabbage, Cauliflower, Greens, Collard, Mustard, Turnip, Kale, Kohlrabi)	Black Leaf Spot (Alternaria), Black Rot (Phytophthora), Downy Mildew (Pseudomonas), Gummy Stem Blight, Powdery Mildew	1 lb.	5.29 lb.	Begin application after transplants are set in the field, or shortly after emergence of field seeded crops or when conditions favor disease development. Apply 7 to 10 day intervals if needed. Minimum retreatment interval is 7 days. <b>NOTE:</b> Reddening of older leaves may occur on broccoli and a flocking of wrapper leaves may occur on cabbage.
Cucurbits (Cantaloupe, Cucurbit, Cucumber, Gummy Stem Blight, Powdery Mildew, Watermelon)	Bacterial Blight, Anthracnose, Downy Mildew	1.5 – 2 lb.	10.5 lb.	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. Minimum retreatment interval is 5 days.
	Fruit Blotch (suppression)	1.5 lb.	10.5 lb.	Apply when plants are set in the field, or shortly after emergence of field seeded crops or when conditions favor disease development. Apply 7 to 10 day intervals if needed. Minimum retreatment interval is 7 days. <b>NOTE:</b> Crop injury may occur from application at higher rates and shorter intervals. Discontinue use if injury occurs.
Eggplant	Alternaria Blight, Anthracnose, Phomopsis	1.5 lb.	15 lb.	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals if needed depending on disease severity. Minimum retreatment interval is 7 days.
Lettuce (including Endive, Escarole)	Downy Mildew	1 – 2 lb.	16 lb.	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. Minimum retreatment interval is 5 days. <b>NOTE:</b> 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.
Okra	Anthracoze, Bacterial Leaf Spot, Leaf Spots, Fruit Spot, Powdery Mildew	1 – 2 lb.	10.5 lb.	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. Minimum retreatment interval is 5 days.
Onion, Garlic, Leek	Bacterial Blight, Downy Mildew, Purple Blotch	1 – 1.5 lb. 2 lb.	12 lb.	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. Minimum retreatment interval is 7 days.
Pea	Powdery Mildew	1.5 lb.	7.9 lb.	Begin applications when disease symptoms first appear and repeat at weekly intervals if needed. Minimum retreatment interval is 7 days.
Pepper	Anthracoze, Bacterial Spot, Cercospora Leaf Spot	1.5 lb.	23.6 lb.	Begin applications when conditions first favor disease development and repeat at 3 to 10 day intervals if needed depending on disease severity. Minimum retreatment interval is 3 days.
(continued)				



VEGETABLES (continued)				
Crop	Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions
Spinach	Anthracoze, Blue Mold, Cercospora Leaf Spot, Downy Mildew, White Rust disease	1.5 lb.	7.9 lb.	Begin application when disease first appears or when conditions favor disease development. Repeat at 7 to 10 day intervals if needed. <b>NOTE:</b> Flecking may occur on spinach leaves. Minimum retreatment interval is 7 days.
Tomato	Anthracoze, Bacterial Speck, Bacterial Spot, Early Blight, Gray Leaf Mold, Late Blight, Septoria Leaf Spot	1 lb. 2 – 3 lb. (fresh market)	34.7 lb. (processing) 16 lb. (fresh market)	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. Minimum retreatment interval is 3 days.
Watercress	Cercospora Leaf Spot	1 lb.	4 lb.	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. 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. Minimum retreatment interval is 7 days.

WINES				
Crop	Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions
Grape	Black Rot, Downy Mildew, Phomopsis, Powdery Mildew	2 – 6 lb.	39.9 lb.	Begin applications at bud break with subsequent applications throughout the season 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. <b>NOTE:</b> Foliage injury may occur on copper sensitive varieties such as Concord, Delaware, Niagara and Rosette. Either test for sensitivity or add 1 to 3 pounds of hydrated lime per pound of KOCIDE® HCU.
Hops	Downy Mildew	1 lb.	5.3 lb.	Make crown treatment after pruning, but before training. After training, apply at 10 day intervals if needed. Minimum retreatment interval is 10 days. <b>NOTE:</b> Discontinue use two weeks before harvest.
Kiwi	<i>Erwinia herbicola</i> , <i>Pseudomonas fluorescens</i> , <i>Pseudomonas syringae</i>	4.2 lb.	12.6 lb.	Apply in 200 gallons of water per acre. Make applications on a monthly basis. Do not exceed three applications per crop. Minimum retreatment interval is 30 days.

MISCELLANEOUS				
Crop	Disease	Application Rate/Acre	Maximum Annual Rate/Acre	Use Instructions
Alamoya	Anthracoze	4 – 6.3 lb.	25.1 lb.	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. Minimum retreatment interval is 7 days.
Carambola	Anthracoze	4.2 lb.	21 lb.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Minimum retreatment interval is 7 days.
Chives	Downy Mildew	1 lb.	5.3 lb.	Begin applications when plants are established in the field. Repeat applications every 7 to 10 days if needed depending on disease conditions. Minimum retreatment interval is 7 days.
Dill	Phoma Leaf Spot, Rhizoctonia Foliage Blight	1.5 lb.	7.9 lb.	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. Minimum retreatment interval is 7 days.
Ginseng	Alternaria Leaf Blight, Stem Blight	2.1 lb.	10.5 lb.	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® HCU "iprodone" 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. <b>NOTE:</b> Alternaria Leaf and Stem Blight is most severe in humid conditions such as those found in the dense canopy 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. Minimum retreatment interval is 7 days.
Guava	Anthracoze, Red Algae	2.4 lb.	9.84 lb.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Minimum retreatment interval is 7 days.
Litchi	Anthracoze	2.4 lb.	9.84 lb.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Minimum retreatment interval is 7 days.
Live Oak*	Ball Moss, Spanish Moss	4 lb.	40 lb.	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. Minimum retreatment interval is 12 months. <b>NOTE:</b> This product may be injurious to ornamentals grown under Live Oaks. This product may be reactive on metal and masonry surfaces such as galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.
Macadamia	Anthracoze	4.7 lb.	18.9 lb.	Initiate sprays at first sign of flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Minimum retreatment interval is 7 days.
	Phytophthora Blight (P. capsici), Raceme Blight (Botrytis cinerea)	3 – 4 lb.	18.9 lb.	Apply during raceme development and bloom periods. Apply in sufficient water for thorough coverage. Use the higher rates when conditions favor disease. Minimum retreatment interval is 7 days.
Mane Sapote	Algal Leaf Spot, Anthracnose	3 – 4.2 lb.	16.8 lb.	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. Minimum retreatment interval is 14 days.
Papaya	Anthracoze	4 – 5 lb.	42.4 lb.	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. Minimum retreatment interval is 7 days.
Parsley	Bacterial Blight (Pseudomonas sp.)	2 lb.	4 lb.	Begin applications when plants are first established in the field and repeat at 10 day intervals if needed depending on disease severity and environmental conditions. Minimum retreatment interval is 10 days.
Passion Fruit	Anthracoze	4.7 lb.	18.8 lb.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Minimum retreatment interval is 7 days.
Sugar Apple (Annona)	Anthracoze	6.3 lb.	25.2 lb.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Minimum retreatment interval is 7 days.
Sycamore	Anthracoze	2 – 4 lb.	40 lb.	Apply as a full cover spray in 100 gallons of water or sufficient volume for thorough coverage. Make first application at bud break and second application 7 to 10 days later at 10% leaf expansion. Use the higher rates when conditions favor disease. Minimum retreatment interval is 7 days.

\*Not registered for use in California

## 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® HCU as a thorough cover spray at rates ranging from 1.5 to 4 pounds 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. KOCIDE® HCU is registered for use on the listed conifers for control of the following diseases.

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

**Lichens:** To control lichens on any of the conifers above, apply 3 to 4 pounds of KOCIDE® HCU 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. **NOTE:** Do not buffer or combine with emulsifiable concentrate insecticides.

## GREENHOUSE AND SHADEHOUSE CROPS

Notice to User: KOCIDE® HCU 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® HCU can be used safely on all greenhouse and shadehouse grown crops. The user must determine if KOCIDE® HCU 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® HCU on these types of greenhouse and shadehouse crops are the responsibility of the user.

Apply KOCIDE® HCU according to specific rates given for those crops in pounds per acre. **Two level tablespoons of KOCIDE® HCU per 1,000 square feet is equivalent to 1.0 pound of product per acre.** Apply KOCIDE® HCU 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.

**NOTE:** Phytotoxicity may occur on young tender flush when KOCIDE® HCU 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.	Begin applications when disease first threatens. Repeat at 7 to 30 day intervals if needed depending on disease severity.
Cucumber	Angular Leaf Spot, Downy Mildew	3 - 4 TBSP.	Apply at 5 to 7 day intervals when plants begin to vine. Use the higher rates when conditions favor disease.
Eggplant	Alternaria Blight, Anthracnose, Phomopsis	2 - 3 TBSP.	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals if needed depending on disease severity.
Pepper	Bacterial Spot	2 - 3 TBSP.	Begin applications when conditions first favor disease development and repeat at 3 to 10 day intervals if needed depending on disease severity. Use the higher rates when conditions favor disease.
Tomato	Anthracoze, Bacterial Speck, Bacterial Spot, Early Blight, Gray Leaf Mold, Late Blight, Septoria Leaf Spot	4 - 6 TBSP.	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.

## ORNAMENTALS

Use KOCIDE® HCU 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 per acre of KOCIDE® HCU. When new growth is present, apply as a thorough cover spray at rates ranging from 1.0 to 2.0 pounds per acre of KOCIDE® HCU. **Two level tablespoons of KOCIDE® HCU per 1,000 square feet is equivalent to 1.0 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.

KOCIDE® HCU 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® HCU 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® HCU. Neither the manufacturer nor seller has determined whether or not KOCIDE® HCU can be used safely on ornamental or nursery plants not listed on this label. The user must determine if KOCIDE® HCU 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. **NOTE:** This product may be reactive on masonry and metal surfaces such as galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.

Crop	Scientific Name	Disease
Aglaonema*	<i>Aglaonema spp.</i>	Bacterial Leaf Spot
Althea (Rose of Sharon)	<i>Hibiscus syriacus</i>	Bacterial Leaf Spot
Andromeda, Japanese*	<i>Pieris japonica</i>	Leaf Spots, Twig Blight
Aralia	<i>Dizygotheca elegantissima</i>	Alternaria, Cercospora Leaf Spot, Xanthomonas Leaf Spot
Arborvitae	<i>Thuja spp.</i>	Alternaria Twig Blight, Cercospora Leaf Blight
Aster*	<i>Aster spp.</i>	Downy Mildew, Leaf Spots
Azalea*	<i>Rhododendron spp.</i>	Botrytis Blight, Cercospora Leaf Spot, Phytophthora Dieback, Powdery Mildew
Beech*	<i>Fagus spp.</i>	Leaf Spots
Begonia	<i>Begonia semperflorens</i>	Bacterial Leaf Spot ( <i>Erwinia</i> spp.), <i>Pseudomonas</i> spp., <i>Xanthomonas</i> spp.)
Bougainvillea	<i>Bougainvillea spectabilis</i>	Anthracoze, Bacterial Leaf Spot
Boxwood*	<i>Buxus spp.</i>	Leaf Spots
Camellia	<i>Camellia japonica</i> , <i>C. sasanqua</i>	Anthracoze, Bacterial Leaf Spot
Camphor Tree	<i>Cinnamomum camphora</i>	Pseudomonas Leaf Spot
Canna	<i>Canna spp.</i>	Pseudomonas Leaf Spot
Carnation*	<i>Dianthus spp.</i>	Alternaria Blight, Botrytis Blight, Pseudomonas Leaf Spot
Cedar*	<i>Cedrus spp.</i>	Tip Blight
Cherry, Nanking*	<i>Prunus tomentosa</i>	Bacterial Leaf Spot
Chinese Tallow Tree	<i>Sapium sebiferum</i>	Bacterial Leaf Spot ( <i>Pseudomonas</i> spp., <i>Xanthomonas</i> spp.)
Chrysanthemum*	<i>Chrysanthemum morifolium</i>	Botrytis Blight, Pseudomonas Leaf Spot, Septoria Leaf Spot
Cotoneaster	<i>Cotoneaster spp.</i>	Botrytis Blight
Crabapple*	<i>Malus spp.</i>	Fire Blight
Cypress*	<i>Cupressus spp.</i>	Twig Blight
Dahlia	<i>Dahlia pinnata</i>	Alternaria Leaf Spot, Botrytis Gray Mold, Cercospora Leaf Spot
Delphinium*	<i>Delphinium spp.</i>	Leaf Spots
Dianthus	<i>Dianthus spp.</i>	Bacterial Soft Rot, Bacterial Spot
Dogwood, Flowering	<i>Cornus florida</i>	Anthracoze
Dogwood, Kousa*	<i>Cornus kousa</i>	Fungal Leaf Spots
Douglas Fir	<i>Pseudotsuga menziesii</i>	Rhabdocline Needlecast
Dracaena*	<i>Dracaena marginata</i>	Bacterial Leaf Spot
Dumb Cane*	<i>Dieffenbachia spp.</i>	Bacterial Leaf Spot
Dusty Miller	<i>Senecio cineraria</i>	Bacterial Leaf Spot ( <i>Pseudomonas cichorii</i> )
Echinacea	<i>Echinacea spp.</i>	Bacterial Leaf Spot ( <i>Pseudomonas cichorii</i> )
Elm, Chinese	<i>Ulmus parvifolia</i>	Xanthomonas Leaf Spot
Euonymus	<i>Euonymus spp.</i>	Anthracoze, Botrytis Blight
Fern Boston*	<i>Neprolepis exaltata</i>	Bacterial Leaf Spot
Fem. Holly	<i>Cyrtomium falcatum</i>	Pseudomonas Leaf Spot
Fig, Weeping*	<i>Ficus benjamina</i>	Bacterial Leaf Spot
Filbert (Ornamental)*	<i>Corylus spp.</i>	Filbert Blight
Fir*	<i>Abies spp.</i>	Needlecasts
Gardenia	<i>Alternaria Leaf Spot, Botrytis Bud Rot, Cercospora Leaf Spot</i>	
Geranium	<i>Alternaria Leaf Spot, Botrytis Gray Mold, Cercospora Leaf Spot</i>	
Gladiolus	<i>Gladiolus spp.</i>	Alternaria Leaf Spot, Anthracnose, Bacterial Leaf Blight, Botrytis Gray Mold
Golden Rain Tree	<i>Koeberuteria paniculata</i>	Bacterial Leaf Spot
Grape Ivy*	<i>Cissus spp.</i>	Bacterial Leaf Spot
Hawthorn*	<i>Crataegus spp.</i>	Fire Blight
Hibiscus*	<i>Hibiscus spp.</i>	Bacterial Leaf Spot

(continued)

## ORNAMENTALS (continued)

Crop	Scientific Name	Disease
Holly*	<i>Ilex spp.</i>	Bacterial Blight, Leaf Spots
Honeylocust*	<i>Gleditsia triacanthos</i>	Bacterial Leaf Spot
Honeysuckle, Tatarian*	<i>Lonicera tatarica</i>	Bacterial Leaf Spot
Impatiens	<i>Impatiens salteriana</i>	Bacterial Leaf Spot
Indian Hawthorn*	<i>Raphiolepis indica</i>	Anthracoze, Entomosporium Leaf Spot
Iris*	<i>Iris spp.</i>	Bacterial Leaf Spot
Ivy (English, Algerian)*	<i>Hedera helix</i> , <i>H. canariensis</i>	Xanthomonas Leaf Spot
Ixora	<i>Ixora coccinea</i>	Xanthomonas Leaf Spot
Juniper	<i>Juniperus spp.</i>	Anthracoze, Phomopsis Twig Dieback*
Lantana	<i>Lantana camera</i>	Bacterial Leaf Spot
Leyland Cypress*	<i>X Cupressocyparis leylandii</i>	Cercospora Needle Blight
Lilac	<i>Syringa spp.</i>	Cercospora Leaf Spot, Pseudomonas Blight*
Lily, Easter*	<i>Lilium longiflorum</i>	Botrytis Blight
Linden*	<i>Tilia spp.</i>	Anthracoze, Leaf Blight
Loblolly Bay	<i>Gordonia lasianthus</i>	Anthracoze
Loquat	<i>Eriobotrya japonica</i>	Colletotrichum spp., Entomosporium maculata
Magnolia (Southern)	<i>Magnolia grandiflora</i>	Algal Leaf Spot, Anthracnose, Bacterial Leaf Spot
Magnolia (Sweet Bay)	<i>Magnolia virginiana</i>	Anthracoze
Magnolia (Oriental)	<i>Magnolia soulangeana</i>	Bacterial Leaf Spot
Mandevilla	<i>Mandevilla spp.</i>	Anthracoze
Maple*	<i>Acer spp.</i>	Pseudomonas Leaf Blight
Margold	<i>Tagetes spp.</i>	Alternaria Leaf Spot, Botrytis Leaf Rot, Cercospora Leaf Spot, Flower Rot
Mountain-Ash*	<i>Sorbus spp.</i>	Fire Blight
Mulberry, Contorted*	<i>Morus bombycis</i>	Bacterial Leaf Spot
Mulberry, Weeping	<i>Morus alba</i>	Bacterial Leaf Spot
Narcissus*	<i>Narcissus spp.</i>	Leaf Blight
Nephthytis*	<i>Syngonium podophyllum</i>	Bacterial Leaf Spot
Oak*	<i>Quercus spp.</i>	Leaf Spots
Oak, Laurel	<i>Quercus laurifolia</i>	Algal Leaf Spot ( <i>Cephalosporium virescens</i> )
Oleander	<i>Nerium oleander</i>	Bacterial Leaf Spot, Fungal Leaf Spot
Oregon Grapeholly*	<i>Mahonia aquifolium</i>	Leaf Spots
Pachysandra	<i>Pachysandra procumbens</i>	Voluella Leaf Blight
Palm, Date	<i>Phoenix canariensis</i>	Pestalotia Leaf Spot
Palm, European Fan	<i>Chamaeceros humilis</i>	Pestalotia Leaf Spot
Palm, Parlor*	<i>Chamaedorea elegans</i>	Bacterial Leaf Spot
Palm, Queen	<i>Arecastrum romanzoffianum</i>	Exosporium Leaf Spot, Phytophthora Bud Rot
Palm, Washingtonia	<i>Washingtonia robusta</i>	Pestalotia Leaf Spot
Peach (Flowering)*	<i>Prunus spp.</i>	Bacterial Blast, Brown Rot, Fire Blight
Pear (Flowering)	<i>Pyrus calleryana</i>	Fire Blight, Leaf Spots
Pentas (Egyptian Star)	<i>Pentas spp.</i>	Bacterial Leaf Spot ( <i>Pseudomonas</i> spp., <i>Xanthomonas</i> spp.)
Peony	<i>Paeonia spp.</i>	Botrytis Blight
Periwinkle	<i>Catharanthus roseus</i> , <i>Vinca spp.</i>	Phomopsis Stem Blight
Philodendron	<i>Philodendron selloum</i>	Bacterial Leaf Spot
Phlox	<i>Phlox spp.</i>	Alternaria Leaf Spot
Photinia (Red Tip)	<i>Photinia x fraseri</i> , <i>P. glabra</i>	Anthracoze, Entomosporium Leaf Spot
Pine*	<i>Pinus spp.</i>	Needlecasts
Pistachio	<i>Pistacia chinensis</i>	Anthracoze
Plantain Lily*	<i>Hosta spp.</i>	Bacterial Leaf Spot
Plum (Flowering)*	<i>Prunus spp.</i>	Bacterial Blast, Brown Rot, Fire Blight
Pothos*	<i>Scindapsus spp.</i>	Bacterial Leaf Spot
Powder Puff Plant	<i>Calliandra spp.</i>	Bacterial Leaf Spot
Pyraecantha	<i>Pyraecantha spp.</i>	Fire Blight, Scab
Rhododendron	<i>Rhododendron spp.</i>	Alternaria Flower Spot
Rose*	<i>Rosa spp.</i>	Black Spot, Powdery Mildew
Snapdragon	<i>Antirrhinum majus</i>	Anthracoze, Dieback, Downy Mildew
Spath Flower*	<i>Spathiphyllum spp.</i>	Bacterial Leaf Spot
Spiraea*	<i>Spiraea spp.</i>	Fire Blight
Spruce*	<i>Picea spp.</i>	Needlecasts
Sycamore	<i>Platanus spp.</i>	Anthracoze, Leaf Spots*
Tulip	<i>Tulipa spp.</i>	Anthracoze, Botrytis Blight
Umbrella Tree*	<i>Schefflera spp.</i>	Bacterial Leaf Spot
Verbena	<i>Verbena spp.</i>	Xanthomonas Leaf Spot
Viburnum	<i>Viburnum odoratissimum</i> , <i>V. plicatum</i> , <i>V. suspensum</i>	Anthracoze
Viola (Pansy, Violet)	<i>Viola spp.</i>	Downy Mildew
Willow	<i>Salix spp.</i>	Anthracoze
Yew*	<i>Taxus spp.</i>	Needle Blight
Yucca (Adam's Needle)	<i>Yucca spp.</i>	Cercospora Leaf Spot, Septoria Leaf Spot
Zinnia*	<i>Zinnia spp.</i>	Leaf Spots

\*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.

†Hibiscus - Do not apply to plants in flower.

\*For Indian Hawthorn use 2 to 3 pounds per acre.

\*Some cultivars may be sensitive to KOCIDE® HCU.

\*Apply KOCIDE® HCU at 3.0 - 5.0 pounds per acre. Maximum annual rate per acre is 150 pounds. Do not apply any additional copper pesticide to this land for 36 months. Minimum retreatment interval is 7 days.

\*Apply dormant through bloom only.

NOTE: Phytotoxicity may depend on varietal differences. If unfamiliar with the use of KOCIDE® HCU, 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® HCU in early spring when the trees are dormant. Apply 3 to 4 pounds of KOCIDE® HCU 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.

NOTE: KOCIDE® HCU may be injurious to some ornamental plants growing beneath the trees. This product may be reactive on masonry and metal surfaces such as galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.

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® HCU 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 turfgreens on sod farms, golf courses, cemeteries, and industrial and residential areas. Apply 3 to 6 pounds per acre (1.1 to 2.2 oz. per 1000 square feet). Apply in sufficient water to provide adequate coverage. KOCIDE® HCU 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.

Minimum retreatment interval is 10 days. 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).

NOTE: Phytotoxicity may occur depending on varietal differences. Apply the recommended 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.

## 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.

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® HCU has been cleared from the last sprinkler head.

## CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water system means a system for 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 of the year.