



**ACCEPTED**  
 DEC 1 1997  
 Under the Federal Insecticide,  
 Fungicide, and Rodenticide Act,  
 as amended, for the pesticide  
 registered under  
 EPA Reg. No. 1812-338

# Kocide® LF

FUNGICIDE / BACTERICIDE

Made in the U

**ACTIVE INGREDIENT**

Copper Hydroxide..... 23%

**INERT INGREDIENTS**..... 77%

**TOTAL**..... 100%

(Metallic Copper Equivalent 15% or 1.6 Pounds Metallic Copper Per Gallon)

(2.4 Pounds Copper Hydroxide Per Gallon)

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**STATEMENT OF PRACTICAL TREATMENT**

**IF IN EYES:** Flush eyes with plenty of water. Call physician if irritation persists.

**IF SWALLOWED:** Call a physician or poison control center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate use of gastric lavage.

See Label for Additional Precautions and Directions for Use

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS (AND DOMESTIC ANIMALS) CAUTION

Causes moderate eye injury. Avoid breathing vapor or spray mist. Harmful if swallowed or absorbed through the skin. Avoid contact with eyes, skin and clothing.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

## USER SAFETY RECOMMENDATION

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. 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. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites.

## DIRECTIONS FOR USE

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

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for protection of agricultural workers on farms, forests, nurseries and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. 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 24 hours without approved PPE.

An eye-flush container, designed specifically for flushing eyes, must be available at the WPS decontamination site for workers entering the area treated with copper hydroxide.

Notify workers of the application by warning them orally that residues in the treated areas may be highly irritating to their eyes and take precautions such as refraining from rubbing their eyes and if they get residues in their eyes they should immediately flush their eyes using the eye-flush container.

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

- Coveralls
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the 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.

Keep unprotected persons out of treated area until sprays have dried.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Store in a cool, dry place.

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

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incinerator, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## GENERAL INSTRUCTIONS

Kocide LF 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 LF 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 Recommended Spray Volume Table. Complete spray coverage is essential to assure optimum performance from Kocide LF. 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 LF label for specific rates and timing of application by crop. Do not apply less than the label recommended minimum amount when selecting a Kocide LF use rate. Where application rates are provided in a range (e.g. 6 to 16 pints and 7 to 10 days), higher rates and shorter intervals are recommended when rainfall is heavy and/or disease pressure is high. Use the higher rates for large mature tree crops.

**SPECIAL PRECAUTIONS**

- Kocide LF should not be applied in a spray solution having a pH of less than 6.5 as phytotoxicity may occur.
- Do not tank mix Kocide LF with Aliette® fungicide for use on any registered crops or ornamentals unless appropriate precautions have been taken to buffer the spray solution or severe phytotoxicity may result. Use in accordance with the most restrictive of label limitations and precautions. No label dosage rates should be exceeded. 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 such as galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.
- Environmental conditions such as extended periods of wet weather, acid rain, etc. which alter the pH of the leaf surface may affect the performance of Kocide LF resulting in possible phytotoxicity or loss of effectiveness.
- Agricultural chemicals may perform in an unpredictable manner when tank mixed, especially where several products are involved. Reduced effect on pests or crop injury may occur. Unless recommended on this label or by a state/local expert, or the user has small scale direct experience, tank mixing should not be undertaken.
- It must be determined in the selection process if proper application equipment is available and if the waste associated with its use can be properly handled. Materials used in the construction of application equipment such as aluminum and some synthetic materials such as plastics, rubbers, etc. are often reactive with agricultural chemicals. Therefore it is necessary when working with equipment containing these materials that they are thoroughly flushed with clean water after each day's use.
- 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, 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.
- While volume is important in obtaining full spray coverage, often factors such as foliage density, environmental conditions and sprayer calibrations, have a greater impact. Always be sure that sprayers are calibrated to spray equipment manufacturer's specifications and environmental conditions are within those recommended by state and local regulatory authorities.
- When mixing, fill spray tank one half full with water. Add Kocide LF 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. Observe all precautions and limitations on the label of all products used in mixtures.

**CROP CLASSIFICATION**

**CITRUS:** Grapefruit, Kumquat, Lemon, Lime, Orange, Tangelo and Tangerine.

**FIELD CROPS:** Alfalfa, Barley, Oats, Peanut, Potato, Sugarbeet and Wheat.

**SMALL FRUITS:** Blackberry, Blueberry, Cranberry, Currant, Gooseberry, Raspberry and Strawberry.

**TREE CROPS:** Almond, Apple, Apricot, Avocado, Banana, Cacao, Cherry, Coffee, Filbert, Mango, Nectarine, Olive, Peach, Pear, Pecan, Pistachio, Plum, Prune, Quince and Walnut.

**VEGETABLES:** Bean, Beet Greens, Broccoli, Brussels Sprout, Cabbage, Cantaloupe, Carrot, Cauliflower, Celeriac, Celery, Cucumber, Eggplant, Endive, Escarole, Greens (Collard, Mustard and Turnip), Honeydew, Lettuce, Muskmelon, Onion/Garlic, Pea, Pepper, Pumpkin, Spinach, Squash, Table Beet, Tomato, Watercress and Watermelon.

**VINES:** Grape, Hops and Kiwi.

**MISCELLANEOUS:** Atemoya, Carambola, Chives, Dill, Douglas Fir, Ginseng, Guava, Litchi, Live Oak, Macadamia, Mamey Sapote, Papaya, Parsley, Passion Fruit, Pecan, Sugar Apple and Sycamore.

**SEED DRESSING:** Rice, Wheat and Barley.

**GREENHOUSE AND SHADEHOUSE CROPS:** Kocide LF may be used in greenhouses and shadehouses to control diseases on any crop on this label where physiology allows greenhouse or shadehouse culture. While specific directions are presented for Citrus, Cucumber, Eggplant, Pepper and Tomato; general use may occur for any crop on this label where physiology allows greenhouse or shadehouse culture.

**TURFGRASS:** Algae control

**ORNAMENTALS:** Species as listed.

**Minimum Recommended Spray Volume (Gallons) Per Acre When Applying Kocide LF**

	Aerial	Ground	
		Dilute	Concentrate
Citrus	10	800	100* (Florida)*
Field Crops	3	20	-
Small Fruits	5	150	50
Tree Crops	10	400	50
Vegetables	3	20	-
Vines	5	150	50
Miscellaneous	10	150	50

**Turf (Algae control):** Apply 1½ pints Kocide LF per 1,000 square feet in 5 gallons of water.

**Seed Dressing:** Follow directions provided.

**Greenhouse and Shadehouse:** Apply Kocide LF according to specific rates given for those crops in pints per acre or pints per 100 gallons. Two teaspoons of Kocide LF per 1,000 square feet is equivalent to 1 pint per acre. One teaspoon of Kocide LF per gallon of water is equivalent to 1 pint per 100 gallons.

**Ornamentals:** Apply 1½ pints Kocide LF per 100 gallons of water (1½ teaspoons per gallon).

\*Pesticide application equipment such as Curtec® or other similar sprayers which are capable of obtaining thorough coverage at low volumes may be used at as low as 20 gpa of spray volume.

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

**FROST INJURY PROTECTION**

**BACTERIAL ICE NUCLEATION INHIBITOR**

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

**CITRUS**

Adding foliar nutritionals or other products to spray mixtures containing Kocide LF and applying to citrus during the post-bloom period when young fruit is present may result in spray burn. Do not use Kocide LF on citrus seedlings less than 2 years old grown in greenhouses or shadehouses.

Disease	Rate/Acre	Use Instructions
Melanose, Scab, Algal Spot	¾-2 gals.	Apply as pre-bloom and post-bloom sprays. Use higher rates when conditions favor disease.
Greasy Spot, Pink Pitting	½-1 gal.	Apply in summer on expanded new flush. Repeat on subsequent flushes where disease pressure is severe. Use higher rates when conditions favor disease.

### CITRUS Cont'd.

Disease	Rate/Acre	Use Instructions
Alternaria Brown Spot (suppression)	1½-1¾ gals.	Apply in summer on expanded new flush. Repeat on subsequent flushes where disease pressure is severe. Use higher rates when conditions favor disease.
	10½-15½ pts.	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 21 day schedule. Use higher rates when conditions favor disease.
Phytophthora Brown Rot, Septoria Spot	¾-1 ½ gals.	Begin application in fall before or just after the first rain and continue as needed. For Brown Rot only, apply to skirts of trees to a height of at least 4 feet. For control of Septoria or where fruit have already been infected with Brown Rot, apply to entire tree. Apply also to bare ground 1 foot beyond skirt. Use higher rates when conditions favor disease. <b>NOTE:</b> In California, in areas subject to copper injury, add ¼ to 1 pound of high quality lime per quart of Kocide LF.
Phytophthora Foot Rot	1½ pts.	Mix with 1 gallon of water, 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. <b>NOTE:</b> Areas where microjet or low volume irrigation hit the tree trunk may require retreatment due to wash off.
Citrus Canker (suppression)	2 gals.	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, each flush of new growth should be sprayed.

**NOTE:** Do not use Kocide LF on citrus seedlings less than 2 years old grown in greenhouses or shadehouses.

### CITRUS Field Nursery Grown

To control Melanose, Scab, Pink Pitting, Greasy Spot, Brown Rot and for suppression of Citrus Canker, apply 2¾ pints of Kocide LF per 100 gallons of water (¾-1 ½ gallon/acre). Apply Kocide LF at 28 day intervals or as needed depending on disease severity.

### FIELD CROPS

Crop	Disease	Rate/Acre	Use Instructions
Alfalfa	Cercospora Leaf Spot, Leptosphaerulina Leaf Spot	2¾ pts.	Apply 10 to 14 days before each harvest or earlier if disease threatens. <b>NOTE:</b> Spray injury may occur with sensitive varieties such as Lathontan.
Peanut	Cercospora Leaf Spot	2-4 pts.	One to two quarts of a 6 pound per gallon or equivalent flowable sulfur per acre may be added. Begin spraying at 35 to 40 days after planting or when disease symptoms first appear and repeat at 10 to 14 day intervals as needed. Reduce sprays to 7 day intervals during humid weather. Use higher rates when conditions favor disease.
Potato	Early Blight, Late Blight	1½-5½ pts.	Apply 1½ to 2¾ pints at 7 to 10 day intervals or as needed starting when plants are 2 to 6 inches high in locations where disease is light and up to 4 to 5½ pints per acre where disease is more severe. Under conditions of severe disease, control with Kocide LF 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.
Sugarbeet	Cercospora Leaf Spot	2¾ - 6¾ pts.	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals as needed. Use higher rate when disease is severe. Addition of a suitable agricultural spray oil is recommended.
Wheat, Barley, Oats	Septoria Leaf Blotch, Helminthosporium Spot Blotch	2-2¾ pts.	Make first application at early heading and follow with second spray 10 days later. Use higher rates when conditions favor disease.

### SMALL FRUITS

Crop	Disease	Rate/Acre	Use Instructions
Blackberry (Santiam, Logan, Boysen, Marion, Aurora, Cascade, Chehalem, Thornless Evergreen)	Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, Yellow Rust, Pseudomonas Blight	5½ pts.	Make fall application after harvest. Apply delayed dormant spray after training in the spring. Add 1 quart of superior-type oil per acre.
	Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, Yellow Rust	2¾ pts.	Apply when leaf buds begin to open and repeat when flower buds show white. Add 1 quart of superior-type oil per acre. <b>NOTE:</b> Crop injury may occur if applied to foliage under certain environmental conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear.
Blueberry	Bacterial Canker	¾ - 1 gal.	Make first application before fall rains and a second application 4 weeks later. Use higher rates when conditions favor disease.

### SMALL FRUITS *Cont'd.*

Crop	Disease	Rate/Acre	Use Instructions
Cranberry	Fruit Rot	1½ gals.	Make first application in late bloom. One or two additional applications at 10 to 14 day intervals may be required depending upon disease severity.
	Rose Bloom	1½ gals.	Apply three sprays on 10 to 14 day schedule as soon as symptoms are observed.
	Bacterial Stem Canker	1½ gals.	Apply post-harvest and again in spring at bud swell. One or two additional applications at 10 to 14 day intervals may be required depending on disease severity.
	Tip Blight (Monilinia), Stem Blight, Leaf Blight, Red Leaf Spot	1½ gals.	Apply delayed dormant spray in the spring. Repeat at 10 to 14 day intervals as needed through pre-bloom.
Currant, Gooseberry	Anthracoese, Leaf Spot	1½ gals.	Make initial application after first leaves have expanded. Continue on a 10 to 14 day schedule during wet conditions in the spring. Make an additional application after harvest.
Raspberry	Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, Yellow Rust, Pseudomonas Blight	5½ pts.	Make fall application after harvest. Apply delayed dormant spray after training in the spring. Add 1 quart of crop oil per acre.
	Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, Yellow Rust	2¾ pts.	Apply when leaf buds begin to open and repeat when flower buds show white. Add 1 quart of crop oil per acre. <b>NOTE:</b> Crop injury may occur if applied to foliage under certain environmental conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear.
Strawberry	Leaf Spot, Leaf Scorch, Leaf Blight, Angular Leaf Spot (Xanthomonas)	2¾-4 pts.	Begin application when plants are established and continue on a weekly schedule throughout season. Apply in at least 20 gallons of water. Use higher rates when conditions favor disease. <b>NOTE:</b> Discontinue applications if signs of crop injury appear.

### TREE CROPS

Crop	Disease	Rate/Acre	Use Instructions
Almond, Apricot, Cherry, Plum, Prune	Coryneum Blight (Shot Hole), Bacteria Canker, Bacteria Blast (Pseudomonas)	1½-2¾ gals.	Make first application before fall rains and a second at late dormant. Use higher rates when conditions favor disease. One pint of superior-type oil may be added. For cherries, where disease is severe, an additional application at leaf fall may be required. <i>Almond only:</i> For Bacterial Blast control in sprinkler irrigated orchards or where disease is severe, apply 1½ pints per acre post-bloom, at 2 week intervals or just before sprinkling. <b>NOTE:</b> Foliar injury may occur from post-bloom sprays on almonds, especially on Neplus varieties.
	Coryneum Blight (Shot Hole), Blossom Brown Rot	1-1½ gals. (almonds) 1½ -2 gals. (all others)	Early bloom (popcorn) application: Apply before full bloom. Use higher rates when rainfall is heavy and disease pressure is high. <b>NOTE:</b> To avoid foliar or crop injury, do not use above rate after full bloom.
Apple	Anthracoese, European Canker (Nectria), Blossom Blast, Shoot Blast (Pseudomonas)	2-2¾ gals.	Apply before fall rains. Use higher rates when conditions favor disease. <b>NOTE:</b> Use on yellow varieties may cause discoloration. To avoid discoloration pick before spraying.
	Fire Blight	1½-2¾ gals.	Make application between silver-tip and green-tip. Apply as a full cover spray. <b>NOTE:</b> Crop injury may occur from late application; discontinue use when green-tip reaches ½ inch.
	Crown Rot, Collar Rot	5½ pts.	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 fall for best results. Do not contact foliage or fruit if present. <b>NOTE:</b> Do not use if soil pH is below 5.5 since copper toxicity may result.
Avocado	Anthracoese, Blotch, Scab	1½-2 gals.	Apply when bloom buds begin to swell and continue application at monthly intervals for five to six applications. Use higher rate when conditions favor disease.
Banana	Sigatoka	2¾ pts.	Apply by air in 3 gallons of water combining ½ gallon of agricultural oil. Apply on a 14 day schedule throughout the wet season. Apply at 21 day intervals during dry periods.
	Black Pitting	5½ pts.	Mix in 100 gallons of water and apply directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after fruit emergence.
Cacao	Black Pod	2¾-11½ pts.	Begin applications at the start of the rainy season and continue while infection conditions persist. Apply 2¾ to 5½ pints at 14 to 21 day intervals as needed. For drier areas, where two to four applications are recommended during critical infection periods and at long intervals use 5½ to 11½ pints per acre according to disease incidence and planting density.
Coffee	Coffee Berry Disease (Colletotrichum coffeanum)	1-1½ gals.	Apply first spray after flowering and before onset of long rains and then at 21 to 28 day intervals until picking. Use higher rates when rainfall is heavy and disease pressure is high.

**TREE CROPS Cont'd.**

<b>Crop</b>	<b>Disease</b>	<b>Rate/Acre</b>	<b>Use Instructions</b>
Coffee Cont'd.	Bacterial Blight ( <i>Pseudomonas syringae</i> )	1-1½ gals.	Begin spray program before the onset of long rainy periods and continue throughout the rainy season at 14 to 21 day intervals. The critical time of spraying to control this disease is just before, during and after flowering(s) especially when coinciding with wet weather. Use higher rates when rainfall is heavy and disease pressure is high.
	Leaf Rust ( <i>Hemileia vastatrix</i> )	2¾-5½ pts.	Apply before the onset of rain and then at 21 day intervals while the rains continue. Use higher rates when rainfall is heavy and disease pressure is high.
	Iron Spot ( <i>Cercospora coffeicola</i> ), Pink Disease ( <i>Corticium salmonicolor</i> )	2¾ pts.	Use concentrate or dilute spray. Begin treatment at the start of wet season and continue at monthly intervals for three applications.
Filbert	Bacterial Blight	2¾-4 gals.	Apply as a post-harvest spray. In seasons of heavy rainfall apply a second spray when three fourths of the leaves have dropped. Add 1 pint of superior-type oil per 100 gallons of water. Use higher rates when rainfall is heavy and disease pressure is high.
	Eastern Filbert Blight	2¾-4 gals.	Apply as a dilute spray in adequate water for thorough coverage. Make initial application after harvest in October before heavy winter rains begin. The next application should be made in late February to early March followed by another application 1 month later. If desired, add 1 pint of a sticking agent or superior-type oil per 100 gallons of water. Use higher rates when rainfall is heavy and disease pressure is high.
Mango	Anthraxnose	1½-1¾ gals.	Apply monthly after fruit set until harvest. Use higher rates when rainfall is heavy and disease pressure is high.
Olive	Peacock Spot, Olive Knot	1½-2 gals.	Make first application before winter rains fall. A second application in early spring should be made if disease is severe. Apply the high rate for heavy disease pressure or when conditions favor disease development.
Peach, Nectarine	Leaf Curl, Coryneum Blight (Shot Hole), Bacterial Canker, Bacterial Blast ( <i>Pseudomonas</i> ), Bacterial Spot ( <i>Xanthomonas</i> )	1½-2¾ gals.	Make first application before fall rains and a second at late dormant. For peach leaf curl, late dormant application must be made before leaf bud swell. Use the highest rate when rainfall is heavy and disease pressure is high. May be used with agricultural spray oil.
	Blossom Brown Rot, Leaf Curl, Coryneum Blight, (Shot Hole)	1½-2 gals.	Full cover spray at pink bud. Use higher rate when conditions favor disease.
	Bacterial Spot	1½ pts.	Post-bloom application applied at first and second cover sprays. <b>NOTE:</b> Do not spray 3 weeks prior to harvest. Use only recommended rates. Spotting of leaves and defoliation may occur from use in cover sprays.
Pear	Fire Blight	1½ pts.	Apply at 5 day intervals throughout the bloom period. <b>NOTE:</b> Russetting may occur in copper sensitive varieties. Excessive dosages may cause fruit russet on any variety.
	Blossom Blast ( <i>Pseudomonas</i> )	2-2¾ gals.	Apply before fall rains and again during dormancy before spring growth starts. Use the higher rate when disease pressure is high or when conditions favor disease development.
Pecan	Shuck Rot, Kernel Rot ( <i>Phytophthora cactorum</i> ), Zonate Leaf Spot ( <i>Cristulariella pyramidalis</i> )	2¾-5½ pts.	For suppression, apply in sufficient water to ensure complete spray coverage at 2 to 4 week intervals starting at kernal growth and continuing until shucks open. Use the higher rate and shorter interval if frequent rainfall occurs.
Pistachio	Botrytis Blight, Botryosphaeria Panicle Blight, Shoot Blight, Septoria Leaf Blight, Late Blight ( <i>Alternaria alternata</i> )	¾-1½ gals.	Make initial application at bud swell and repeat on a 14 to 28 day schedule. If disease conditions are severe, use the high rate and short spray interval.
Quince	Fire Blight	1½ pts.	Apply at 5 day intervals through bloom period. Apply in adequate water for thorough coverage.
Walnut	Walnut Blight	1½-2 gals.	Apply first spray at early pre-bloom prior to or when catkins are partially expanded. Make additional applications during bloom and early nutlet stage or as needed if frequent rainfall or extended periods of moisture occur. Thorough coverage of catkins, leaves and nutlets is essential for effective control. When applied as a dilute spray, 1 pint of summer oil emulsion may be added per 100 gallons of spray. <b>NOTE:</b> Adequate control may not be obtained when copper tolerant species of <i>Xanthomonas</i> bacteria are present.

## VEGETABLES

Crop	Disease	Rate/Acre	Use Instructions
Bean (dry, green)	Brown Spot, Halo Blight, Common Blight	1½-4 pts.	Use the higher rate for more severe disease. For protective sprays, make first application when plants are 6 inches high; repeat on a 7 to 14 day schedule depending upon environmental conditions.
Beet (Table Beet, Beet Greens)	Cercospora Leaf Spot	2½-6½ pts.	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals as needed. Use the higher rate when conditions favor disease.
Carrot	Alternaria Leaf Spot, Cercospora Leaf Spot	2½ pts.	Begin application when disease first threatens and repeat at 7 to 14 day intervals as needed depending on disease severity.
Celery, Celeriac	Cercospora Early Blight, Septoria Late Blight, Bacterial Blight	2½ pts.	Begin applications as soon as plants are first established in the field, repeating at 5 to 7 day intervals depending on disease severity and environmental conditions.
Crucifers: (Broccoli, Brussels Sprout, Cabbage, Cauliflower, Collard Greens, Mustard Greens, Turnip Greens)	Black Rot (Xanthomonas), Black Leaf Spot (Alternaria), Downy Mildew	1½-2½ pts.	Apply at 7 to 10 day intervals as needed. Begin application after transplants are set in the field, or shortly after emergence of field seeded crops or when conditions favor disease development. Use higher rate when conditions favor disease. <b>NOTE:</b> Reddening of older leaves may occur on broccoli and a flecking of wrapper leaves may occur on cabbage.
Cucurbits (Cucumber, Cantaloupe, Honeydew, Muskmelon, Pumpkin, Squash, Watermelon)	Alternaria Leaf Spot, Angular Leaf Spot, Anthracnose, Downy Mildew, Powdery Mildew, Gummy Stem Blight, Watermelon Bacterial Fruit Blotch (suppression)	2-4 pts.	Begin application when conditions are favorable for disease development. Repeat at 5 to 7 day intervals or as needed. Use higher rates when conditions favor disease. <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	2½ pts.	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals or as needed depending on disease severity.
Lettuce, Endive, Escarole	Downy Mildew	1½-2½ pts.	Begin treatment when disease first appears and repeat every 7 to 10 days as needed to suppress disease. Use shorter intervals and higher rates when conditions favor disease. <b>NOTE:</b> Flecking and/or yellowing of leaves will occur under certain environmental conditions such as extended periods of moist weather, acid rains, or other conditions favoring reduced pH on leaf surfaces. Injury may be severe enough to reduce crop value.
Onion, Garlic	Purple Blotch, Downy Mildew Bacterial Blight	2½ pts.	Begin when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals as needed depending upon disease pressure. Can cause phytotoxicity to leaves.
Pea	Powdery Mildew	2-4 pts.	Begin applications when disease symptoms first appear and repeat at weekly intervals as needed. Use higher rate for more severe disease.
Pepper	Bacterial Spot	2½-4 pts.	Begin applications when conditions first favor disease development and repeat at 5 to 10 day intervals as needed depending on disease severity. Use higher rates for severe disease.
Spinach	Anthracnose, White Rust, Blue Mold, Cercospora Leaf Spot	2½-4 pts.	Begin application when disease first appears or when conditions favor disease development. Repeat at 7 to 10 day intervals as needed. Use higher rates when conditions favor disease. <b>NOTE:</b> Flecking may occur on spinach leaves.
Tomato	Anthracnose, Bacterial Speck, Bacterial Spot, Early Blight, Gray Leaf Mold, Late Blight, Septoria Leaf Spot	2½-5½ pts.	Begin when disease first threatens and repeat at 7 to 10 day intervals or as needed depending on disease severity. Use higher rates when conditions favor disease.
Watercress	Cercospora Leaf Spot	2½ pts.	Begin application when plants are first established in the field, repeating at 7 to 14 day intervals depending on disease severity and environmental conditions. Do not exceed four applications per crop. Apply using ground spray equipment at no less than 50 gallons of spray solution per acre.

VINES

Crop	Disease	Rate/Acre	Use Instructions
Grape	Black Rot, Powdery Mildew, Downy Mildew	2½ pts.	Begin application at bud break with subsequent applications throughout the season depending upon disease severity. <b>NOTE:</b> Foliage injury may occur on copper sensitive varieties such as Concord, Delaware, Niagara and Rosettes. Either test for sensitivity or add 1 to 3 pounds of hydrated lime per 2½ pints of Kocide LF.
Hops	Downy Mildew	2½ pts.	Make crown treatment after pruning, but before training. After training, additional treatments are needed at about 10 day intervals or as needed. <b>NOTE:</b> Discontinue use 2 weeks before harvest.
Kiwi	<i>Pseudomonas syringae</i> , <i>Erwinia herbicola</i> , <i>Pseudomonas fluorescens</i>	1½ gals.	Apply in 200 gallons of water per acre. Make application on a monthly basis. A maximum of three applications may be made.

SEED DRESSING

Do not use treated seed for food, feed or oil purposes.

Crop	Disease	Rate/Acre	Use Instructions
Rice	<i>Achlya</i> spp., <i>Pythium</i> spp.	4-8 fl. oz. per 100 lbs. of seed	When using a seed treating machine dilute with an equal amount of water. Consult State Agricultural Experiment Station regarding specific recommendations.
Wheat, Barley	<i>Pseudomonas syringae</i> , <i>Xanthomonas translucens</i> , <i>Tilletia caries</i>	4 fl. oz. per 100 lbs. of seed	When using a seed treating machine dilute with an equal amount of water. Consult State Agricultural Experiment Station regarding specific recommendations.

MISCELLANEOUS

Crop	Disease	Rate/Acre	Use Instructions
Atemoya	Anthracnose	4-6 pts.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use higher rate for severe disease.
Carambola	Anthracnose	1-1½ gals.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use higher rate for severe disease.
Chives	Downy Mildew	2½ pts.	Begin applications when plants are established in the field. Repeat applications every 7 to 10 days as dictated by disease conditions.
Dill	Phoma Leaf Spot, Rhizoctonia Foliage Blight	2½-4 pts.	Begin applications when plants are first established in the field and repeat at 7 to 10 day intervals or as needed depending upon disease severity and environmental conditions. Use higher rate when conditions favor disease.
Douglas Fir	Rhabdocline Needlecast	2½-4 pts.	Begin applications at bud break and repeat at 3 to 4 week intervals as needed. Use higher rate for severe disease.
Ginseng	Alternaria Leaf Blight, Stem Blight	3½-5 pts.	Use as a tank mix with 2 pounds Rovral® 50W in 100 gallons of water. Use in accordance with the most restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Begin Kocide-Rovral applications as soon as plants have emerged in spring. Applications should be repeated every 7 days until plants become dormant in fall. Use a spray apparatus which distributes the fungicide throughout the canopy and thoroughly covers the stems. 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 canopies of 2, 3, and 4 year old Ginseng. It is very important that the stems be thoroughly covered with fungicide; therefore, use a spray apparatus which distributes the fungicide throughout the canopy.
Guava	Anthracnose, Red Algae	4-6 pts.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use higher rate for severe disease.
Litchi	Anthracnose	4-6 pts.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use higher rate for severe disease.
Live Oak, Pecan	Ball Moss	1-2 gals.	Apply in 100 gallons of water, in the spring when ball moss is actively growing, using 1½ gallons of spray per foot of tree height. Make sure to wet ball moss tufts thoroughly. A second application may be required after 12 months. <b>NOTE:</b> Kocide LF may be injurious to ornamentals grown under Live Oaks. 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.



MISCELLANEOUS Cont'd.

Crop	Disease	Rate/Acre	Use Instructions
Macadamia	Anthracoze	1-1½ gals.	Initiate sprays at first sign of flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use higher rate for severe disease.
	Phytophthora Blight ( <i>P. capsici</i> ), Raceme Blight ( <i>Botrytis cinerea</i> )	¾-1½ gals.	Apply during raceme development and bloom periods. Apply in sufficient water for thorough coverage. Use higher rate for severe disease.
Mamey Sapote	Anthracoze, Algal Leaf Spot	1-1½ gals.	Apply when conditions favor disease development. Repeat on 14 to 30 day schedule as disease severity and environmental conditions dictate. Use higher rates when conditions favor disease.
Papaya	Anthracoze	¾-1½ gals.	Apply before disease appears. Apply at 10 to 14 day intervals under light disease pressure and 5 to 7 day intervals or as needed under heavy disease pressure. The addition of an approved spreader is desirable. Use higher rates when conditions favor disease.
Parsley	Bacterial Blight ( <i>Pseudomonas sp.</i> )	4 pts.	Begin applications when plants are first established in the field and repeat at 5 to 7 day intervals depending upon disease severity and environmental conditions.
Passion Fruit	Anthracoze	1-1½ gals.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use higher rates when conditions favor disease.
Sugar Apple (Annona)	Anthracoze	2-3 gals.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage. Use higher rates when conditions favor disease.
Sycamore	Anthracoze	2½-4 pts.	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 higher rates when conditions favor disease.

TURFGRASS

To control algae in turfgrass, apply 1½ pints Kocide LF per 1,000 square feet in 5 gallons of water. Kocide LF 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.

**NOTE:** Phytotoxicity may occur depending upon 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.

GREENHOUSE AND SHADEHOUSE CROPS

**Notice to User:** Kocide LF may be used in greenhouses and shadehouses to control diseases on some crops which appear on this label; specific instructions have been developed for the crops listed below. The grower should bear in mind that the sensitivity of crops grown in greenhouses and shadehouses differ greatly from crops grown under field conditions. Neither the manufacturer nor seller has determined whether or not Kocide LF can be used safely on all greenhouse and shadehouse grown crops. The user should determine if Kocide LF can be used safely prior to commercial use. In a small area, apply the recommended rates to the plants in question, i.e. foliage, fruit, etc., and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use.

Apply Kocide LF according to specific rates given for those crops in pounds per acre or pounds per 100 gallons. Two teaspoons of Kocide LF per 1000 square feet is equivalent to 1 pint per acre. One teaspoon of Kocide LF per gallon of water is equivalent to 1 pint per 100 gallons. Kocide LF should be applied in adequate water for thorough coverage of plant parts. Begin application at first sign of disease and repeat at 7 to 14 day intervals as needed; use shorter interval during periods when severe disease conditions persist.

Crop	Disease	Rate Per 1000 Sq. Ft.	Use Instructions
Citrus (Non-Bearing Nursery)	Melanose, Scab, Pink Pitting, Greasy Spot, Brown Rot, Citrus Canker	1-1½ fl. oz.	Begin applications when disease threatens. Repeat at 30 day intervals or as needed depending on disease severity. Use higher rates when conditions favor disease.
Cucumber	Angular Leaf Spot, Downy Mildew	¾-1½ fl. oz.	Apply weekly when plants begin to vine. Use higher rates when conditions favor disease.
Eggplant	Alternaria Blight, Anthracnose, Phomopsis	1 fl. oz.	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals or as needed depending on disease severity.
Pepper	Bacterial Spot	1-1½ fl. oz.	Begin applications when conditions first favor disease development and repeat at 5 to 10 day intervals as needed depending on disease severity. Use higher rates when conditions favor disease.
Tomato	Anthracoze, Bacterial Speck, Bacterial Spot, Early Blight, Grey Leaf Mold, Late Blight, Septoria Leaf Spot	1-2 fl. oz.	Begin when disease first threatens and repeat at 7 to 10 day intervals or as needed depending on disease severity. Use higher rate when conditions favor disease.

## ORNAMENTALS

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

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

**For Control of Disease on Ornamentals in Greenhouses, Field and Nurseries** – Apply as a thorough coverage spray using 1½ pints of Kocide LF per 100 gallons of water (1¼ teaspoons per gallon). Begin application at first sign of disease and repeat at 7 to 14 day intervals as needed; use shorter interval during periods of frequent rains or when severe disease conditions persist.

Kocide LF may be used as a maintenance spray. Kocide LF 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. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

Crop	Latin Name	Disease
Aglaonema	<i>Aglaonema</i>	Bacterial Leaf Spot
Althea (Rose of Sharon)	<i>Hibiscus syriacus</i>	Bacterial Leaf Spot
Aralia	<i>Dizygotheca elegantissima</i>	Xanthomonas Leaf Spot, Cercospora Leaf Spot, Alternaria
Arborvitae	<i>Thuja</i> sp.	Alternaria Twig Blight, Cercospora Leaf Blight
Azalea 1/	<i>Rhododendron</i> sp.	Cercospora Leaf Spot, Botrytis Blight, Phytophthora Dieback, Powdery Mildew
Begonia	<i>Begonia semperflorens</i>	Bacterial Leaf Spot ( <i>Xanthomonas</i> sp., <i>Erwinia</i> sp., <i>Pseudomonas</i> sp.)
Boston Fern	<i>Nephrolepis exaltata</i>	Bacterial Leaf Spot
Bougainvillea	<i>Bougainvillea spectabilis</i>	Anthrachnose, Bacterial Leaf Spot
Bulbs (Tulip, Gladiolus)	Miscellaneous	Anthrachnose, Botrytis Blight
Camelia	<i>Camellia japonica</i> , <i>C. sasangua</i>	Anthrachnose, Bacterial Leaf Spot
Camphor Tree	<i>Cinnamomum camphora</i>	Pseudomonas Leaf Spot
Canna	<i>Canna</i> sp.	Pseudomonas Leaf Spot
Camation 1/	<i>Dianthus</i> sp.	Alternaria Blight, Pseudomonas Leaf Spot, Botrytis Blight
Chinese Tallow Tree	<i>Sapium sebiferum</i>	Bacterial Leaf Spot ( <i>Xanthomonas</i> sp., <i>Pseudomonas</i> sp.)
Chrysanthemum 1/	<i>Chrysanthemum morifolium</i>	Septoria Leaf Spot, Botrytis Blight
Cotoneaster	<i>Cotoneaster</i> sp.	Botrytis Blight
Dahlia	<i>Dahlia pinnata</i>	Alternaria Leaf Spot, Botrytis Gray Mold, Cercospora Leaf Spot
Date Palm	<i>Phoenix canariensis</i>	Pestalotia Leaf Spot
Dianthus	<i>Dianthus</i> sp.	Bacterial Spot, Bacterial Soft Rot
Dogwood	<i>Cornus florida</i>	Anthrachnose
Dracaena	<i>Dracaena marginata</i>	Bacterial Leaf Spot
Dumb Cane	<i>Dieffenbachia</i>	Bacterial Leaf Spot
Dusty Miller	<i>Senecio cineraria</i>	Bacterial Leaf Spot ( <i>Pseudomonas cichorii</i> )
Easter Lily 2/	<i>Lilium longiflorum</i>	Botrytis Blight
Echinacea	<i>Echinacea</i> sp.	Bacterial Leaf Spot ( <i>Pseudomonas cichorii</i> )
Elm "Drake"	<i>Ulmus parvifolia</i>	Xanthomonas Leaf Spot
Euonymus	<i>Euonymus</i> sp.	Botrytis Blight, Anthrachnose
European Fan Palm	<i>Champaerops numilis</i>	Pestalotia Leaf Spot
Gardenia	<i>Gardenia jasminoides</i>	Alternaria Leaf Spot, Botrytis Bud Rot, Cercospora Leaf Spot
Geranium	<i>Pelargonium</i> sp.	Alternaria Leaf Spot, Botrytis Gray Mold, Cercospora Leaf Spot
Gladiolus	<i>Gladiolus</i> sp.	Alternaria Leaf Spot, Botrytis Gray Mold, Bacterial Leaf Blight
Golden Rain Tree	<i>Koelreuteria paniculata</i>	Bacterial Leaf Spot
Grape Ivy	<i>Cissus</i> sp.	Bacterial Leaf Spot
Hibiscus	<i>Hibiscus rosa-sinensis</i>	Bacterial Leaf Spot
Hibiscus, Rose Mallow 5/	Common Rose Mallow	Bacterial Leaf Spot
Holly Fern	<i>Cyrtomium falcatum</i>	Pseudomonas Leaf Spot
Honey Locust	<i>Gleditsia triacanthos</i>	Bacterial Leaf Spot
Impatiens	<i>Impatiens sallerana</i>	Bacterial Leaf Spot
India Hawthorn 3/	<i>Raphiolepis indica</i>	Anthrachnose, Entomosporium Leaf Spot
Iris 4/	<i>Iris</i> sp.	Bacterial Leaf Spot
Ivy (English, Algerian) 1/	<i>Hendera helix</i> , <i>H. canariensis</i>	Xanthomonas Leaf Spot
Ixora	<i>Ixora coccinea</i>	Xanthomonas Leaf Spot
Juniper (Eastern Red Cedar)	<i>Juniperus virginiana</i>	Anthrachnose
Lantana	<i>Lantana camera</i>	Bacterial Leaf Spot
Lilac	<i>Syringa</i> sp.	Cercospora Leaf Spot

Crop	Latin Name	Disease
Loblolly Bay	<i>Gordonia lasianthus</i>	Anthracnose
Loguait	<i>Eriobotrya japonica</i>	<i>Entomosporium maculata</i> , <i>Colletotrichum</i> sp.
Magnolia (Southern)	<i>Magnolia grandiflora</i>	Algal Leaf Spot, Anthracnose, Bacterial Leaf Spot
Magnolia (Sweet Bay)	<i>Magnolia virginiana</i>	Anthracnose
Magnolia	<i>Magnolia soulangiana</i>	Bacterial Leaf Spot
Mandevillas	<i>Mandevilla</i> sp.	Anthracnose
Marigold	<i>Tagetes</i> sp.	Alternaria Leaf Spot, Botrytis Leaf Rot, Flower Rot, Cercospora Leaf Spot
Mulberry, Contorted	<i>Morus bombycis</i>	Bacterial Leaf Spot
Mulberry, Weeping	<i>Morus alba</i>	Bacterial Leaf Spot
Nephtytis	<i>Syngonium podophyllum</i>	Bacterial Leaf Spot
Oleander	<i>Nerium oleander</i>	Bacterial Leaf Spot, Fungal Leaf Spot
Oak, Laurel	<i>Quercus laurifolia</i>	Algal Leaf Spot ( <i>Cephaleuros virescens</i> )
Pachysandra	<i>Pachysandra procumbens</i>	Volutella Leaf Blight
Pansy	<i>Viola</i> sp.	Downy mildew
Parlor Palm	<i>Chamaedorea elegans</i>	Bacterial Leaf Spot
Pear (Flowering)	<i>Pyrus calleryana</i>	Fire Blight, Leaf Spot
Pentas (Egyptian Star)	<i>Pentas</i> sp.	Bacterial Leaf Spot ( <i>Xanthomomas</i> sp.)
Peony	<i>Paeonia</i> sp.	Botrytis Blight
Periwinkle	<i>Catharanthus roseus</i> , <i>Vinca</i> sp.	Phomopsis Stem Blight
Philodendron	<i>Philodendron selloum</i>	Bacterial Leaf Spot
Phlox	<i>Phlox</i> sp.	Alternaria Leaf Spot
Photinia (Red-tip)	<i>Photinia fraserii</i> , <i>P. glabra</i>	Anthracnose, Entomosporium
Pistachio	<i>Pistacia chinensis</i>	Anthracnose
Plantain Lily 4/	<i>Hosta</i> sp.	Bacterial Leaf Spot
Powder Puff Plant	<i>Callindra</i> sp.	Bacterial Leaf Spot
Pothos	<i>Scindapsus</i> sp.	Bacterial Leaf Spot
Purple Osier Willow	<i>Salix purpurea</i>	Anthracnose
Pyracantha	<i>Pyracantha</i> sp.	Fire Blight, Scab
Queen Palm	<i>Arecastrum romanzoffianum</i>	Exosporium Leaf Spot, Phytophthora Bud Rot
Rhododendron	<i>Rhododendron</i> sp.	Alternaria Flower Spot
Rose 1/	<i>Rosa</i> sp.	Powdery Mildew, Black Spot
Snapdragon	<i>Antirrhinum majus</i>	Anthracnose, Dieback, Downy Mildew
Spathe Flower	<i>Spathiphyllum</i>	Bacterial Leaf Spot
Tatarian Honeysuckle	<i>Lonicera tatarica</i>	Bacterial Leaf Spot
Umbrella Tree	<i>Schefflera</i> sp.	Bacterial Leaf Spot
Verbena	<i>Verbena</i> sp.	Xanthomonas Leaf Spot
Viburnum	<i>Viburnum odoratissimum</i> , <i>V. suspensum</i> , <i>Viburnum plicatum</i>	Anthracnose
Washingtonia Palm	<i>Washingtonia robusta</i>	Pestalotia Leaf Spot
Weeping Fig	<i>Ficus benjamina</i> L.	Bacterial Leaf Spot
Weeping Willow	<i>Salix babylonica</i>	Anthracnose
Yucca (Adam's needle)	<i>Yucca</i> sp.	Cercospora Leaf Spot, Septoria Leaf Spot

1/ Discoloration of foliage and/or blooms has been noted on some varieties. To prevent residues on commercial plants, do not spray just before selling season.

2/ Apply Kocide LF at 4 to 6 2/3 pints per acre in 20 to 100 gallons water per acre.

3/ For India Hawthorn use 2 2/3 to 5 1/2 pints per 100 gallons.

4/ Some cultivars may be sensitive to Kocide LF.

5/ Hibiscus – Do not apply to plants in flower.

**NOTE:** Phytotoxicity may depend on varietal differences. If unfamiliar with the use of Kocide LF, apply the recommended rate to a few plants and observe after 7 to 10 days for symptoms of phytotoxicity.

### GENERAL 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 sprinkler systems: center pivot, lateral move, traveler, big gun, 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 non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service Specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the

system down and make necessary adjustments should the need arise.

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

### 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, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

**NOTE:** It must be determined in the selection process if proper application equipment is available and if the waste associated with its use can be properly handled. Materials used in the construction of application equipment is also an important factor as agricultural chemicals are often reactive with soft metals such as aluminum and even some synthetic materials such as plastics, rubbers, etc. Therefore it is necessary when working with equipment containing these materials that they are thoroughly flushed with clean water after each day's use.

When mixing, fill nurse tank half full with water. Add Kocide LF 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 cautions and limitations on the label of all products used in mixtures. Agitation of the mixture in the nurse tank is recommended.

Kocide LF should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Shut off injection equipment after treatment and continue to operate irrigation system until Kocide LF 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 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, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

**NOTE:** It must be determined in the selection process if proper application equipment is available and if the waste associated with its use can be properly handled. Materials used in the construction of application equipment is also an important factor as agricultural chemicals are often reactive with soft metals such as aluminum and even some synthetic materials such as plastics, rubbers, etc. Therefore it is necessary when working with equipment containing these materials that they are thoroughly flushed with clean water after each day's use.

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

### WARRANTY STATEMENT

GRIFFIN warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of GRIFFIN. In no case shall GRIFFIN be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. The exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall not exceed the purchase price paid for this product or at Griffin Corporation's election, the replacement of this product. GRIFFIN MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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