Kocide® 101

FUNGICIDE/BACTERICIDE

Wettable Powder

ACTIVE INGREDIENT	
Copper Hydroxide	77%
INERT INGREDIENTS	23%
TOTAL	100%

(Metallic Copper Equivalent 50%)

KEEP OUT OF REACH OF CHILDREN

DANGER – PELIGRO

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

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Hold eyelids open and flush with water for 15 minutes. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF SWALLOWED: Drink promptly a large quantity of milk, egg white, gelatin solution, or if these are not available, large quantities of water. Avoid alcohol. Get medical attention. **NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate use of gastric lavage.

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

For medical emergencies involving this product, call toll free 1-888-324-7598.

See Label for Additional Precautions and Directions for Use

GRIFFIN L.L.C.
VALDOSTA, GEORGIA 31601

Specimen Label

EPA REG. NO. 1812-288

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)
DANGER – PELIGRO

Corrosive. Causes irreversible eye damage. Harmful if swallowed, absorbed through the skin or inhaled. May cause skin sensitization reactions in certain individuals. Avoid contact with the skin, eyes or clothing. Avoid breathing dust.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

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

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

USER SAFETY RECOMMENDATIONS

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. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Do not allow rinsate from cleaning of equipment or disposed material to enter surface or groundwater.

DIRECTIONS FOR USE

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for 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 intervals. 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 required PPE.

The following equipment and precautions must be followed for 7 days following the application of this product:

– 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 to 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

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: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL INSTRUCTIONS

Use Kocide 101 as noted below. Kocide 101 is adaptable to spraying from aircraft and ground spraying equipment. Depending upon the equipment used and the specific crop, the volume applied per acre will differ. Refer to recommended volume table below.

Minimum Recommended Spray Volume (Gallons) Per Acre when Applying Kocide 101

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

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

Agricultural chemicals may perform in an unpredictable manner when tank mixed, especially where several products are involved. Reduced effect on pests or crop injury may occur. Unless recommended on this label or by a state/local expert, it is advisable to test for compatibility and tolerance to crop injury prior to full scale commercial utilization of a new tank mix or tank mixing should not be undertaken.

Shut off injection equipment after treatment and continue to operate irrigation system until Kocide 101 has been cleared from the last sprinkler head.

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.

GENERAL CHEMIGATION INSTRUCTIONS

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.

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, 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.

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day

care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2½ inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

This sign is in addition to any sign posted to comply with the Worker Protection Standard.

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.

When mixing, fill nurse tank half full with water. Add Kocide 101 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.

Kocide 101 should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Agitation is recommended.

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.

When mixing, fill nurse tank half full with water. Add Kocide 101 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.

Kocide 101 should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Agitation is recommended.

CROP CLASSIFICATION

CITRUS: Grapefruit, Lemon, Lime, Kumquat,* 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, Broccoli, Brussels Sprout, Cabbage, Cantaloupe, Carrot, Cauliflower, Celeriac, Celery, Collard, Cucumber, Eggplant, Honeydew, Muskmelon, Onion, Pea, Pepper, Pumpkin, Spinach, Squash, Table Beet, Tomato, Watercress* and Watermelon.

VINES: Grape, Hops and Kiwi.

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

GREENHOUSE AND SHADEHOUSE CROPS: Eggplant,* Pepper,* Tomato* and Citrus.*

ORNAMENTALS: Species as listed.

*Except California

Kocide 101 may be applied as an aerial, ground concentrate spray unless specifically directed otherwise by crop.

When selecting a use rate for Kocide 101 do not apply less than the label recommended minimum amount. Under heavy disease pressure or when conditions favor such, use the higher rate and shorter spray intervals specified for each crop. In addition, use the higher rates for large mature tree crops.

The per acre use rate of Kocide 101 is applicable for both dilute and concentrate spraying. Consult the Kocide 101 label for specific rates and timing of application by crop.

Complete spray coverage is essential to assure optimum performance from Kocide 101. When treating on a concentrate basis or by aerial application, unless you have had specific previous experience, it is advisable to test for compatibility and crop tolerance prior to full scale commercial utilization.

While volume is important in obtaining full spray coverage, 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 101 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.

NOTE: Kocide 101 should not be applied in a spray solution having a pH less than 6.5 as phytotoxicity may occur.

Environmental conditions such as extended periods of wet weather, acid rain, etc. which alter the pH of the leaf surface may affect the performance of Kocide 101 resulting in possible phytotoxicity or loss of effectiveness.

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

NOTE: Where application rates are provided in a range (4 to 12 pounds), the higher rates are recommended when rainfall is heavy and disease pressure is high.

FROST INJURY PROTECTION

BACTERIAL ICE NUCLEATION INHIBITOR

Application of Kocide 101 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 to spray mixtures containing Kocide 101 or other products and applying to citrus during the post-bloom period when young fruit is present may result in spray burn.

Disease	Rate/Acre	Use Instructions
Melanose, Scab, Pink Pitting	4-12 lbs.	Apply as pre-bloom and post-bloom sprays.
Greasy Spot	2-6 lbs.	Apply in summer on expanded new flush. Repeat on subsequent flushes if disease conditions are present.
Brown Rot	4-8 lbs.	Begin application in fall and continue as needed. Apply to skirts of trees to a height of at least 4 feet. Apply also to bare ground 1 foot beyond skirt.
Alternaria Brown Spot (Suppression Only)*	8-10 lbs.	On susceptible varieties apply when the first spring flush appears and each flush thereafter. Application to the fruiting bodies should start after two thirds of the petals have fallen and be repeated on a 21 day schedule. **NOTE**: In California, in areas subject to copper injury, add ⅓ to 1 pound of high quality lime per pound of Kocide 101.

CITRUS *Cont'd.*

Disease	Rate / Acre	Use Instructions
Phytophthora	1 lb.	Mix with 1 gallon of water and paint trunks of trees from the soil surface to the lowest scaffold limbs. Treatment serves for protection for up to 1 year, but does not cure existing infections. **NOTE**: Areas where microjet or low volume irrigation hit the tree trunk may require retreatment due to wash off.
Citrus Canker (Suppression Only)	12 lbs.	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.

*Except California

FIELD CROPS

Crop	Disease	Rate/Acre	Use Instructions
Alfalfa	Cercospora, Leptosphaerulina Leaf Spot	2 lbs.	Apply 10 to 14 days before each harvest or earlier if disease threatens. **NOTE**: Crop injury may occur with sensitive varieties, such as Lahontan. Determine the sensitivity of the variety in question by testing Kocide 101 on a small area before treating an entire field.
Peanut	Cercospora Leaf Spot	1.5-3 lbs.	1 to 2 quarts of 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.
Potato	Early Blight, Late Blight	1-4 lbs.	Apply 1 to 1.5 pounds at 7 to 10 day intervals starting when plants are 6 inches high until 2 weeks before harvest in locations where disease is light and up to 3 to 4 pounds per acre where disease is more severe.
Sugarbeet	Cercospora Leaf Spot	2-5 lbs.	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals as needed. Addition of a suitable agricultural spray oil is recommended.
Wheat, Oats, Barley	Septoria Leaf Blotch, Helminthosporium Spot	1.5-2 lbs.	Make first application at early heading and follow with second spray 10 days later. **NOTE:** Crop injury may occur with sensitive varieties. Determine the sensitivity of the variety in question by testing Kocide 101 on a small area before treating an entire field.

SMALL FRUITS

Crop	Disease	Rate/Acre	Use Instructions
Blackberry (Santiams, Logans, Boysens, Marions, Auroras, Cascades, Chehalems, Thornless Evergreens)	Leaf Spot, Cane Spot	4 lbs.	Apply delayed dormant spray after training in the spring. Make fall application after harvest. Add 1 quart of crop oil per acre.
Blueberry*	Bacterial Canker	3-5 lbs.	Make first application before fall rains and a second application 4 weeks later.
Cranberry	Fruit Rot	8 lbs.	Make first application in late bloom. One or two additional applications at 10 to 14 day intervals may be required depending upon disease severity.
Currant, Gooseberry	Cercospora Leaf Spot	10 lbs.	Make three applications starting after harvest followed by application before bloom and after petal fall.
Raspberry	Leaf Spot, Cane Spot	4 lbs.	Apply delayed dormant spray after training in the spring. Make fall application after harvest. Add 1 quart of crop oil per acre.
Strawberry	Leaf Spot, Leaf Blight	2-3 lbs.	Begin application when plants are established and continue on a weekly schedule throughout season. **NOTE**: Discontinue applications if signs of crop injury appear.

*Except California

TREE CROPS

Crop	Disease	Rate/Acre	Use Instructions
Almond	Coryneum Blight, Brown Rot, Blossom Blight	8-12 lbs.	Dormant application: Apply before foliage buds begin to swell.
		6-8 lbs.	Early bloom (popcorn) application: Apply before full bloom. **NOTE:** To avoid plant injury, do not use above rate after full bloom.
	Bacterial Blast (Pseudomonas)	12-16 lbs.	Apply at dormant to early pink bud. For control in sprinkler irrigated orchards or where disease is severe, apply 1 pound per acre at 2 week post-bloom intervals or just before sprinkling. **NOTE**: Injury may occur from post-bloom sprays, especially on Neplus varieties.
Apple	Anthracnose, European Canker, Pseudomonas	12-16 lbs.	Apply pre or postharvest before fall rains. Use higher rates under severe disease conditions. **NOTE**: Use on yellow varieties may cause discoloration. To avoid, pick before spraying.
	Fire Blight	8-16 lbs.	Make application between silver-tip and green-tip. Apply as a full cover spray. **NOTE**: Crop injury may occur from late application; discontinue use when green tip reaches ½ inch.
	Crown Rot, Collar Rot	4 lbs.	Mix in 100 gallons of water. Apply 4 gallons of suspension as a drench on the lower trunk area of each tree. Apply either in early spring or in late fall after harvest. **NOTE**: Do not use if soil pH is below 5.5 since copper toxicity may result.
Apricot	Coryneum Blight (Shot Hole), Blossom Blight, Brown Rot	8-12 lbs.	Apply when trees are dormant to full bloom. **NOTE**: Applications applied after bloom will result in crop injury.
	Bacterial Blast (Pseudomonas)	12-16 lbs.	Apply at dormant to early pink bud. **NOTE**: Applications applied after bloom will result in crop injury.
Avocado	Scab	8-12 lbs.	Apply when bloom buds begin to swell and continue application at monthly intervals for five to six applications.
	Anthracnose*	8-12 lbs.	Apply at monthly intervals.
Banana	Sigatoka	2 lbs.	Apply by air in 3 gallons of water combining 0.5 gallon of agricultural oil. Apply on a 14 day schedule throughout the wet season. Apply at 21 day intervals during dry periods.
	Black Pitting	4 lbs.	Mix in 100 gallons of water. Apply directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after fruit emergence.
Cacao	Black Pod	2-8.5 lbs.	Begin applications at the start of the rainy season and continue while infection conditions persist. Apply 2 to 4.5 pounds as often as 14 to 21 days in high rainfall areas at varying rates depending on disease severity. For drier areas, where two to four applications are recommended during critical infection periods and at long intervals, use 8.5 pounds per acre, according to disease incidence and planting density.

TREE CROPS *Cont'd.*

Crop	Disease	Rate/Acre	Use Instructions
Cherry	Dead Bud *(Pseudomonas syringae),* Coryneum Blight	8-12 lbs.	Make first application in fall before heavy rains and a second at late dormant. In orchards where the disease is severe, a spray should also be applied shortly after harvest. Add 1 pint of superior-type oil per 100 gallons of water as a dilute spray.
	Brown Rot, Blossom Blight	8-12 lbs.	Apply a full cover spray at popcorn stage and a second application at full bloom.
Coffee	Coffee Berry Disease *(Colletotrichum coffeanum)*	6-8 lbs.	Apply first spray after flowering and before onset of long rains and then at 21 to 28 days interval until picking.
	Bacterial Blight *(Pseudomonas syringae)*	6-8 lbs.	Begin spray program before the onset of the long rains and continue throughout the rainy season at 14 to 21 day intervals. The critical time of spraying to control this disease is just before, during and after flowering(s) especially when coinciding with wet weather.
	Leaf Rust *(Hemileia vastatrix)*	2-4 lbs.	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 *(Cercospora coffeicola)*, Pink Disease *(Corticium salmonicolor)*	2 lbs.	Use concentrate or dilute spray. Begin treatment at the start of wet season and continue at monthly intervals for three applications.
Filbert	Bacterial Blight	16-24 lbs.	Apply as a postharvest 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 depending on disease pressure.
	Eastern Filbert Blight	16-24 lbs.	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.
Mango (Florida)	Anthracnose	8 lbs.	Apply monthly after fruit set until harvest.
Olive (California)	Peacock Spot	8-12 lbs.	Make first application before winter rains fall. A second application in early spring should be made if disease is severe.
Peach, Nectarine	Leaf Curl, Coryneum Blight (Shothole)	8-16 lbs.	Apply at leaf fall. May be used with agricultural spray oil.
	Brown Rot, Blossom Blight	8-12 lbs.	Full cover spray at pink bud. Application at this time affords some control of Leaf Curl and Coryneum Blight.
	Bacterial Spot	1 lb.	Post-bloom application applied at first and second cover sprays.
		8-16 lbs.	Apply as a dormant spray. **NOTE: 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	1 lb.	Apply at 5 day intervals throughout the bloom period.
	Pseudomonas Blight	12-16 lbs.	Apply pre or postharvest before fall rains and again during dormancy before spring growth starts. **NOTE**: Excessive dosages may cause fruit russet.
Pecan	Shuck Rot, Kernel Rot *(Phytophthora cactorum),* Zonate Leaf Spot *(Cristulariella pyramidalis)*	2-4 lbs.	For suppression, apply in sufficient water to ensure complete spray coverage at 2 to 4 week intervals starting at kernel growth and continuing until shucks open. Use the higher rate and shorter interval if frequent rainfall occurs.
Pistachio	Botrytis Blight, Botryosphaeria Panicle, Shoot Blight, Septoria Leaf Blight, Late Blight *(Alternaria alternata)*	4-8 lbs.	Make initial application at bud swell and repeat on a 14 to 28 day schedule as dictated by disease conditions. If disease conditions are severe, use the high rate and short spray interval.
Plum, Prune	Coryneum Blight (Shothole)	8-16 lbs.	Apply as a dormant spray.
	Brown Rot, Blossom Blight	8-12 lbs.	Apply full cover application at pink, red or early white bud stage.
Quince	Fire Blight	1 lb.	Apply at 5 day intervals through bloom period. Apply in adequate water for thorough coverage.
Walnut	Walnut Blight	8-12.5 lbs.	Apply first application 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 occurs. Thorough coverage of catkins, leaves and nutlets is essential for effective control. **NOTE**: When applied as a dilute spray, 1 pint of summer oil emulsion may be added per 100 gallons of spray. Adequate control may not be obtained when copper tolerant species of xanthomonas bacteria are present.

*Except California

VEGETABLES

Crop	Disease	Rate/Acre	Use Instructions
Bean	Bacterial Blight (Halo, Common), Brown Spot	1-3 lbs.	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 local conditions.
Broccoli, Brussels Sprout, Cabbage, Cauliflower, Collard	Black Rot *(Xanthomonas* sp.), Black Leaf Spot *(Alternaria* sp.), Downy Mildew	1-2 lbs.	Apply at 7 to 10 day intervals. For control of disease of these crops, begin application after transplants are set in the field, or shortly after emergence of field seeded crops or when conditions favor disease development. Use short interval and higher rates when conditions favor disease. **NOTE**: Reddening of older leaves may occur on broccoli and a flecking of wrapper leaves may occur on cabbage.
Cantaloupe, Honeydew, Muskmelon	Downy Mildew	2 lbs.	Begin application when conditions are favorable for disease development and repeat at 5 to 7 day intervals as needed depending on disease severity.
Carrot	Cercospora Leaf Spot	2 lbs.	Begin application when disease first threatens and repeat at 7 to 14 day intervals as needed depending on disease severity.
Celery, Celeriac	Cercospora Early Blight, Septoria Late Blight, Bacterial Blight	2 lbs.	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.

VEGETABLES *Cont'd.*

Crop	Disease	Rate/Acre	Use Instructions
Cucumber	Angular Leaf Spot, Downy Mildew	1.5-2 lbs.	Apply weekly when plants begin to vine.
Eggplant	Alternaria Blight, Anthracnose, Phomopsis	2 lbs.	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals or as needed depending on disease severity.
Onion	Purple Blotch, Downy Mildew	2 lbs.	Begin when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals as needed depending upon disease pressure. **NOTE**: When applying to onions a suitable spreader-sticker cleared for application to growing crops must be added to the tank.
Pea	Powdery Mildew	1.5-3 lbs.	Begin applications when disease symptoms first appear and repeat at weekly intervals as needed. Use higher rate for more severe disease.
Pepper	Bacterial Spot	2-3 lbs.	Begin applications when conditions first favor disease development and repeat at 7 to 10 day intervals as needed depending on disease severity.
Pumpkin, Squash	Powdery Mildew	1.5-3 lbs.	Begin applications when plants are 3 weeks old or when disease symptoms first appear and repeat at 7 day intervals as needed to maintain control.
Spinach	Anthracnose, White Rust, Downy Mildew, Cercospora Leaf Spot, Black Leaf Spot	1-2 lbs.	Begin application when disease first appears or when conditions favor disease development. Repeat at 7 to 10 day intervals as needed. **NOTE**: Flecking may occur on spinach leaves.
Table Beet	Cercospora Leaf Spot	2-5 lbs.	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals as needed. Addition of a suitable agricultural spray oil is recommended.
Tomato	Early Blight, Late Blight	2-3 lbs.	Begin when disease first threatens and repeat at 7 to 10 day intervals or as needed depending on disease severity.
	Bacterial Speck	2 lbs.	Begin applications when disease first threatens and repeat at 10 to 30 day intervals or as needed depending on disease severity.
	Bacterial Spot, Anthracnose, Gray Leaf Mold, Septoria Leaf Spot	2-4 lbs.	Begin applications when disease first threatens and repeat at 7 to 10 day intervals or as needed depending on disease severity.
Watercress*	Cercospora Leaf Spot	2 lbs.	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.
Watermelon	Anthracnose	2 lbs.	Apply as soon as plants become established in the field and repeat at weekly intervals as needed depending upon disease severity.
	Downy Mildew	1.5-3 lbs.	Apply as soon as plants become established in the field and repeat at weekly intervals as needed depending upon disease severity.

*Except California

VINES

Crop	Disease	Rate/Acre	Use Instructions
Grape	Black Rot, Powdery Mildew, Downy Mildew	2 lbs.	Begin application at bud break with subsequent applications throughout the season depending upon disease severity. **NOTE**: 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 101.
Hops	Downy Mildew	2 lbs.	Make crown treatment after pruning, but before training. After training, additional treatments are needed at about 10 day intervals. **NOTE:** Discontinue use 2 weeks before harvest.
Kiwi	*Pseudomonas syringae, Erwinia herbicola, Pseudomonas fluorescens*	8 lbs.	Apply in 200 gallons of water per acre. Make applications on a monthly basis. A maximum of three applications may be made.

MISCELLANEOUS

Crop	Disease	Rate/Acre	Use Instructions
Atemoya*	Anthracnose	3 lbs.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.
Carambola*	Anthracnose	6 lbs.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.
Chives*	Downy Mildew	2 lbs.	Begin applications when plants are established in the field. Repeat applications every 7 to 10 days as dictated by disease conditions. If disease pressure is high, use the shorter spray interval.
Douglas Fir*	Rhabdocline Needlecast	2 lbs.	Begin applications at bud break and repeat at 3 to 4 week intervals. Apply in a tank mix with another registered pesticide if moderate to severe disease pressure is present.
Ginseng*	Alternaria Leaf Blight, Stem Blight	2.6 lbs.	Use as a tank mix with 2 pounds Rovral® 50W in 100 gallons of water. 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. If schedule application is to be made before a rain shower, apply fungicides at least 8 hours before the rain, giving the fungicides time to dry on the plants. Use of a spreader-sticker or sticker is advised. **NOTE**: Alternaria Leaf and Stem Blight is most severe in humid conditions such as those found in the dense canopies to 2, 3, 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	3 lbs.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.

MISCELLANEOUS *Cont'd.*

Crop	Disease	Rate/Acre	Use Instructions
Litchi*	Anthracnose	3 lbs.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.
Live Oak (Texas, Florida)	Ball Moss	3 lbs.	Apply 6 pounds per 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. A second application may be required after 12 months. **NOTE**: Kocide 101 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*	Anthracnose	6 lbs.	Initiate sprays at first sign of flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.
	Phytophthora Blight *(P.capsici)*, Raceme Blight *(Botrytis cinerea)*	4.5-6 lbs.	Apply during raceme development and bloom periods. Apply in sufficient water for thorough coverage.
Mamey Sapote*	Anthracnose, Algal Leaf Spot	6-8 lbs.	Apply when conditions favor disease development. Repeat on 14 to 30 day schedule as disease severity and environmental conditions dictate.
Papaya*	Anthracnose	4-10 lbs.	Begin applications before disease appears and repeat at 10 to 14 day intervals. Apply at 5 to 7 day intervals during periods of heavy rainfall. Use higher rates when conditions favor disease.
Parsley*	Bacterial Blight	3 lbs.	Begin applications when plants are first established in the field and repeat at 5 to 7 days intervals depending upon disease severity and environmental conditions.
Passion Fruit*	Anthracnose	6 lbs.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.
Sugar Apple (Annona)*	Anthracnose	12 lbs.	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.
Sycamore	Anthracnose	2-3 lbs.	Apply as a full cover spray. Apply 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.

*Except California

GREENHOUSE AND SHADEHOUSE CROPS – (Except California)

Notice to User: Kocide 101 may be used in greenhouses and shadehouses to control diseases on some crops which appear on this label. The grower should bear in mind that the sensitivity of crops grown in greenhouses and shadehouses differ greatly from crops grown under field conditions. Neither the manufacturer nor seller has determined whether or not Kocide 101 can be used safely on all greenhouse and shadehouse grown crops. The user should determine if Kocide 101 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 101 according to specific rates given for those crops in pounds per acre or pounds per 100 gallons. Two level tablespoons of Kocide 101 per 1000 square feet is equivalent to 1 pound per acre. One level tablespoon of Kocide 101 per gallon of water is equivalent to 1 pound per 100 gallons. Kocide 101 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
Eggplant	Alternaria Blight, Anthracnose, Phomopsis	4 TBSP	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals or as disease pressure dictates.
Pepper	Bacterial Spot	4-6 TBSP	Begin applications when conditions first favor disease development and repeat at 5 to 10 day intervals as needed depending on disease severity. Use higher rates for severe disease.
Tomato	Early Blight, Late Blight	4-6 TBSP	Begin when disease first threatens and repeat at 7 to 10 day intervals or as needed depending on disease severity. Use higher rate for severe disease.
	Bacterial Speck	4 TBSP	Begin applications when disease first threatens and repeat at 7 to 10 day intervals or as needed depending on disease severity.
	Bacterial Spot, Anthracnose, Gray Leaf Mold, Septoria Leaf Spot	4-8 TBSP	Begin applications when disease first threatens and repeat at 7 to 10 day intervals or as needed depending on disease severity. Use higher rate for severe disease.
Citrus (Non-Bearing Nursery)	Melanose, Scab, Pink Pitting, Greasy Spot, Brown Rot, Citrus Canker	6 TBSP	Begin applications when disease threatens. Repeat at 30 day intervals or as needed depending on disease severity.

CITRUS – Field Nursery Grown

To control Melanose, Scab, Pink Pitting, Greasy Spot, Brown Rot and for Citrus Canker (suppression), apply 2 pounds of Kocide 101 per 100 gallons of water (4 to 8 pounds per acre). Apply Kocide 101 at 28 day intervals or as needed depending on disease severity.

ORNAMENTALS

Notice to User: Plant sensitivities to Kocide 101 have been found to be acceptable in specific genera and species listed on this label, however, it is impossible to know sensitivities under all conditions and phytotoxicity may occur. Due to the large number of species and varieties of ornamentals and nursery plants, it is impossible to test every one for sensitivity to Kocide 101. Neither the manufacturer nor seller recommends use upon species not listed on the label nor has it been determined that Kocide 101 can be safely used on ornamental or nursery plants not listed on this label. The user should determine if Kocide 101 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 101 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.

One level tablespoon of Kocide 101 per gallon of water is equivalent to 1 pound per 100 gallons.

Apply as a thorough coverage spray using 1 pound Kocide 101 per 100 gallons of water. 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 101 may be used alone or in combination with other registered fungicides as a maintenance spray. Observe all precautions and limitations on the label of each product used in tank mixes.

NOTE: Do not tank mix Kocide 101 with Aliette® fungicide unless appropriate precautions have been taken to buffer the spray solution. Severe phytotoxicity may result if adequate precautions are not taken.

Crop	Latin Name	Disease
Althea (Rose of Sharon)*	*Hibiscus syriacus*	Bacterial Leaf Spot
Aralia	*Dizygotheca elegantissima*	Xanthomonas Leaf Spot, Cercospora Leaf Spot, Alternaria
Arborvitae*	*Thuja* sp.	Alternaria Twig Blight, Cercospora Leaf Blight
Azalea [1]	*Rhododendron* sp.	Cercospora Leaf Spot, Botrytis Blight, Phytophthora Dieback, Powdery Mildew
Begonia	*Begonia semperflorens*	Bacterial Leaf Spot (*Xanthomonas* sp., *Erwina* sp., *Pseudomonas* sp.)
Bougainvillea*	*Bougainvillea spectabilis*	Anthracnose, Bacterial Leaf Spot
Bulbs (Tulip, Gladiolus)	Miscellaneous	Anthracnose, Botrytis Blight
Camphor Tree*	*Cinnamomum camphora*	Pseudomonas Leaf Spot
Carnation [1]	Dianthus sp.	Alternaria Blight, Pseudomonas Leaf Spot, Botrytis Blight
Camellia*	*Camellia japonica, C. sasanqua*	Anthracnose, Bacterial Leaf Spot
Canna*	*Canna* sp.	Pseudomonas Leaf Spot
Chinese Tallow Tree*	*Sapium sebiferum*	Bacterial Leaf Spot (*Xanthomonas* sp., *Pseudomonas* sp.)
Chrysanthemum [1]	*Chrysanthemum morifolium*	Septoria Leaf Spot, Botrytis Blight
Cotoneaster	*Cotoneaster* sp.	Botrytis Blight
Dahlia*	*Dahlia pinnata*	Alternaria Leaf Spot, Botrytis Gray Mold, Cercospora Leaf Spot
Date Palm*	*Phoenix canariensis*	Pestalotia Leaf Spot
Dianthus*	*Dianthus* sp.	Bacterial Spot, Bacterial Soft Rot
Dogwood*	*Cornus florida*	Anthracnose
Dusty Miller*	*Senecio cineraria*	Bacterial Leaf Spot *(Pseudomonas cichorii)*
Easter Lily [2]*	*Lilium longiflorum*	Botrytis Blight
Echinacea*	*Echinacea* sp.	Bacterial Leaf Spot *(Pseudomonas cichorii)*
Elm "Drake"*	*Ulmus parvifolia*	Xanthomonas Leaf Spot
Euonymus	*Euonymus* sp.	Botrytis Blight, Anthracnose
European Fan Palm*	*Champaerops numilis*	Pestalotia Leaf Spot
Gardenia*	*Gardenia jasminoides*	Alternaria Leaf Spot, Botrytis Bud Rot, Cercospora Leaf Spot
Geranium*	*Pelargonium* sp.	Alternaria Leaf Spot, Botrytis Gray Mold, Cercospora Leaf Spot
Gladiolus*	*Gladiolus* sp.	Alternaria Leaf Spot, Botrytis Gray Mold, Bacterial Leaf Blight
Golden Rain Tree*	*Koelreuteria paniculata*	Bacterial Leaf Spot
Hibiscus*	*Hibiscus rosa sinensis*	Bacterial Leaf Spot
Holly Fern*	*Cyrtomium falcatum*	Pseudomonas Leaf Spot
Impatiens*	*Impatiens sallerana*	Bacterial Leaf Spot
India Hawthorn [3]*	*Raphiolepis indica*	Anthracnose, Entomosporium Leaf Spot
Ivy (English, Algerian) [1]	*Hendera helix, H. canariensis*	Xanthomonas Leaf Spot
Ixora*	*Ixora coccinea*	Xanthomonas Leaf Spot
Juniper (Eastern Red Cedar)*	*Juniperus virginiana*	Anthracnose
Lantana*	*Lantana camera*	Bacterial Leaf Spot
Lilac*	*Syringa* sp.	Cercospora Leaf Spot
Loblolly Bay*	*Gordonia lasianthus*	Anthracnose
Loquat*	*Eriobotrya japonica*	*Entomosporium maculata, Colletotrichum* sp.
Mandevillas*	*Mandevilla* sp.	Anthracnose
Magnolia (Southern)*	*Magnolia grandiflora*	Algal Leaf Spot, Anthracnose, Bacterial Leaf Spot
Magnolia (Sweet Bay)*	*Magnolia virginiana*	Anthracnose
Magnolia*	*Magnolia soulangiana*	Bacterial Leaf Spot
Marigold*	*Tagetes* sp.	Alternaria Leaf Spot, Botrytis Leaf Rot, Flower Rot, Cercospora Leaf Spot
Mulberry, Weeping*	*Morus alba*	Bacterial Leaf Spot
Oleander*	*Nerium oleander*	Bacterial Leaf Spot, Fungal Leaf Spot
Oak, Laurel*	*Quercus laurifolia*	Algal Leaf Spot *(Cephaleuros virescens)*
Pachysandra	*Pachysandra procumbens*	Volutella Leaf Blight
Pansy*	*Viola* sp.	Downy Mildew
Pear (Flowering)*	*Pyrus calleryana*	Fire Blight, Leaf Spot
Peony*	*Paeonia* spp.	Botrytis Blight
Pentas (Egyptian Star)*	*Pentas* spp.	Bacterial Leaf Spot *(Xanthomomas* sp.*)*
Periwinkle	*Catharanchus roseus, Vinca* sp.	Phomopsis Stem Blight
Phlox*	*Phlox* sp.	Alternaria Leaf Spot
Pistachio	*Pistacia chinensis*	Anthracnose
Plantain Lily*	*Hosta* sp.	Bacterial Leaf Spot
Powder Puff Plant*	*Calliandra* sp.	Bacterial Leaf Spot
Philodendron*	*Philodendron selloum*	Bacterial Leaf Spot
Photinia (Red Tip, Red Leaf)*	*Photinia fraserii, P. glabra*	Anthracnose, Entomosporium
Pyracantha	*Pyracantha* sp.	Fire Blight, Scab
Queen Palm*	*Arecastrum romanzoffianum*	Exosporium Leaf Spot, Phytophthora Bud Rot
Rhododendron*	*Rhododendron* sp.	Alternaria Flower Spot
Rose [1]	*Rosa* sp.	Powdery Mildew, Black Spot
Verbena*	*Verbena* sp	Xanthomonas Leaf Spot
Viburnum*	*Viburnum odoratissimum, V. suspensum*	Anthracnose
Washingtonia Palm*	*Washingtonia robusta*	Pestalotia Leaf Spot
Weeping Willow*	*Salix babylonica*	Anthracnose
Yucca (Adam's needle)	*Yucca* 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 101 at 3 to 5 pounds per acre in 20 to 100 gallons water per acre.
[3] For India Hawthorn use 2 to 4 pounds per 100 gallons or 2 to 4 level tablespoons per gallon.
* Except California

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'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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