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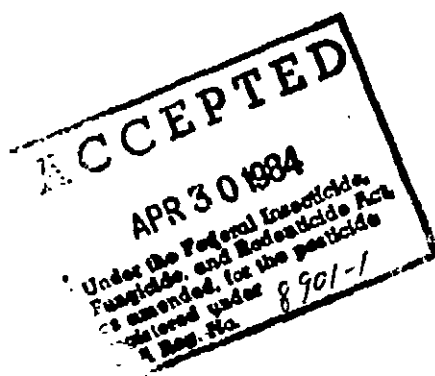
KOCIDE 101
EPA REG. NO. 8901-1

Added Usage:

FROST INJURY PROTECTION

Bacterial Ice Nucleation Inhibitor: Application of KOCIDE 101 made to crops at rates indicated on the current KOCIDE 101 label, just prior to anticipated frost conditions will afford control of ice nucleating bacteria (*Pseudomonas syringae*, *Erwinia herbicola* and *Pseudomonas fluorescens*) and may therefore provide protection against light frost.

Not recommended for those geographical areas where weather conditions favor severe frost.



FRONT LABEL



KOCIDE CHEMICAL CORPORATION
Houston Texas 77045

Kocide®

ACTIVE INGREDIENT
CUPRIC HYDROXIDE 77%
INERT INGREDIENTS 23%

100%

(METALLIC COPPER EQUIVALENT ... 50%)

CAUTION: KEEP OUT OF REACH
OF CHILDREN
HARMFUL IF SWALLOWED.
IF SWALLOWED,
INDUCE VOMITING.
GET MEDICAL
ATTENTION.

U.S. PATENT NO. 3,428,731
EPA REG. NO. 8901-1

**WETTABLE POWDER
AGRICULTURAL
FUNGICIDE**

20 LBS. NET

SEE BACK PANEL FOR ADDITIONAL CAUTIONS

KOCIDE® 101 AGRICULTURAL FUNGICIDE

GENERAL INSTRUCTIONS

Use KOCIDE 101 as noted below. KOCIDE 101 is adaptable to spraying from all types of spray equipment. Depending on the equipment used and the specific crop, the volume applied per acre will differ. For dilute, high volume sprays: use from 25 to 100 gallons of water per acre (GPA) for most vegetable crops, 400 to 800 GPA for fruit orchards and up to 1500 GPA as may be required for large citrus groves. For concentrate ground sprays apply from 5 to 20 GPA for most vegetable crops and 25 to 100 GPA for fruit and nut crops. For aerial spraying, 3 to 15 GPA are commonly used. No additional surfactants are needed. Add KOCIDE 101 slowly to a spray tank partially filled with water. Spreader-stickers, insecticides, nutrients, etc. should be added last. Observe all cautions and limitations on label of all products used in mixtures.

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

STORAGE AND DISPOSAL: Do not contaminate water, food or feed by storage or disposal. Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Reclamation Act. Dispose of container according to Federal, State or Local procedures under the Resource Conservation and Reclamation Act.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

HOMEOWNER USE

1 level tablespoon of KOCIDE 101 per gallon of water is equivalent to 1 pound per 100 gallons. Make application according to specific instructions given below for those crops where rates are given in pounds/hundred gallons. (For example: 2 pounds KOCIDE 101 per 100 gallons are equivalent to 2 level tablespoons KOCIDE 101 per gallon.)

CAUTION: Avoid contact with skin and eyes. In case of skin contact, remove with washing; for eyes, wash with copious amounts of water and get immediate medical attention. This product is toxic to fish. Do not apply directly to lakes, streams or ponds. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Apply this product only as specified on this label.

NOTICE: KOCIDE CHEMICAL CORPORATION warrants that this product in its unopened package conforms to the chemical description on the label and is reasonably fit for the purposes set forth on the label when used according to directions under normal use conditions on the plants and crops specified. **THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.** This warranty does not extend to the handling or use of this product contrary to label instructions or under abnormal conditions or under conditions not reasonably foreseeable to seller and buyer assumes all risk of any such use.

DIRECTIONS FOR USE

ALFALFA, *Cercospora* & *Leptosphaerulina* Leaf Spots. Apply at 2 pounds per acre 10-14 days before each harvest or earlier if disease threatens. Apply with ground or aerial equipment. Spray injury may occur with sensitive varieties such as Lahontan.

ALMONDS, *Coryneum* Blight & Blossom Brown Rot. Use 2-3 pounds KOCIDE 101 per 100 gallons of water (300-400 GPA) in late dormant before foliage buds swell if frequent rainfall occurs. A second application should be made during the early bloom stage (popcorn). To avoid plant injury, do not use above rate after full bloom. *Bacterial Blast* (*Pseudomonas*). Use 3-4 pounds KOCIDE 101 per 100 gallons at dormant to early pink bud. For blast control in sprinkler irrigated orchards or where disease is severe, apply 2-4 KOCIDE sprays at 0.25 pound per 100 gallons at 2 week post-bloom intervals or just before sprinkling. Slight leaf injury may occur from post-bloom spray.

APPLE, Anthracnose, European Canker, *Pseudomonas*. Apply before fall rains at 3-4 pounds per 100 gallons (300-400 GPA). Use on yellow varieties may cause discoloration. To avoid, pick before spraying. *Fireblight*. Apply at 2-4 pounds/100 gallons of water as a full cover spray. Make application between silver-tip and green-tip. **CAUTION:** Phytotoxicity may occur from late application. (Discontinue use when green-tip is 1/2-inch). *Crown or Collar Rot*. Mix 4 pounds 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 fall after harvest each year. Do not use if soil pH is below 5.5 or copper toxicity may result. (EXCEPT CALIFORNIA).

APRICOTS, *Coryneum* Blight (Shot Hole) & Blossom Brown Rot. Apply at popcorn to full bloom using 2-3 pounds per 100 gallons (300-400 GPA). To avoid spray injury, do not apply after bloom.

AVOCADOS, Scab. Apply when bloom buds begin to swell at 2 pounds KOCIDE 101 per 100 gallons or 8-10 pounds per acre depending on equipment. Continue application at monthly intervals for 5 to 6 applications. Follow recommendations of State Agricultural Experiment Stations.

BANANAS, Sigatoka. Apply by air at 2 pounds per acre in 3 gallons of water containing 0.5 gallon agricultural oil. Apply on a 14 day schedule throughout the wet season. Apply at 21 day intervals during dry periods. *Black Pitting*. Apply at 4 pounds per 100 gallons directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after emergence.

BEANS, *Bacterial Blight* (Halo & Common). For protective sprays, apply first application when plants are six inches high. Apply on 7-14 day schedule depending on local conditions. Use 1-3 pounds per acre depending on disease severity.

BLACKBERRIES (Santiams, Logans, Boysens, Marions, Auroras, Cascades, Chehalms, and Thornless Evergreens), Leaf & Cane Spot. Apply delayed dormant spray after training in spring at 4 pounds plus 1 quart superior-type oil per 100 gallons. Make fall spray application after harvest using 4 pounds plus 1 quart superior-type oil per 100 gallons.

BROCCOLI, BRUSSELS SPROUT, CABBAGE & CAULIFLOWER, Downy Mildew. Apply 0.5 to 1 pound in a minimum of 25 GPA at 7 day intervals (CABBAGE ONLY). *Black Rot* (*Xanthomonas*) & *Black Leaf Spot* (*Alternaria*). Apply at 2 pounds per acre in a minimum of 25 GPA at 7 to 10 day intervals. (Caution: A slight reddening of older leaves may occur on broccoli and a slight flecking of wrapper leaves may occur on cabbage at the two pound rate). For control of diseases of these crops, begin applications after transplants are set in the field or shortly after emergence of field-seeded crops or when conditions favor disease development.

CACAO, Black Pod. Begin applications at the start of the rainy season and continue while infection conditions persist. Sprays should be made as often as 14 to 21 days in high rainfall areas at varying rates from 2 to 4.5 pounds per acre depending on disease severity. For drier areas, where 2 to 4 applications are recommended during critical infection periods and at long intervals, use 6.5 to 8.5 pounds per acre according to disease incidence and planting density.

CANTALOUPE, HONEYDEWS & MUSKMELONS, Downy Mildew. Apply weekly at 2 pounds per acre before disease appears.

CARROTS, Carrot Blight (*Cercospora*). When disease threatens, apply 2 pounds per acre at 7 to 14 day intervals depending on disease severity.

CELERY, Early, Late & Bacterial Blights. Apply as soon as plants are first established in the field at 2 pounds per acre then every 5-7 days depending on severity and weather. One or two quarts of a suitable agricultural spray oil per acre may be used as spreader-sticker.

CHERRY, Dead Bud (*Pseudomonas syringae*) & *Coryneum* Blight. Apply 6 pounds plus 1 pint superior-type oil per 100 gallons in October (before heavy fall rains) and again in January. In orchards where the disease is severe, a spray should also be applied in August. *Brown Rot Blossom Blight*. For adequate control apply 2-3 pounds per 100 gallons as a full cover spray at popcorn and full bloom.

CITRUS, Melanose, Scab, Greasy Spot & Pink Pitting. Apply as pre-bloom and post bloom sprays. Use 0.75 to 1.5 pounds KOCIDE 101 per 100 gallons, depending on disease severity. May be used in concentrate sprays at equivalent rates. For aerial application use 6 pounds KOCIDE per 10 gallons per acre. *Brown Rot*. Use 0.5 to 1 pound per 100 gallons as dilute spray or at equivalent rate as concentrate spray depending on severity of disease. Begin application in fall before or just after first heavy rains. Apply to skirts of trees to a height of at least 4 feet. Apply also to bare ground one foot beyond skirt. (California only. In areas subject to copper injury, add 1/2 to 1 pound of high quality lime per pound of KOCIDE 101).

COFFEE, Iron Spot (*Cercospora coffeicola*) & Pink Disease (*Corticium salmonicolor*). Apply at 2 pounds per acre as a concentrate or dilute spray. Begin treatment at start of wet season and continue at monthly intervals for three applications. *Leaf Rust* (Brazil). Apply at 3.5 to 5.5 pounds per acre for average density plantations. High density plantations may require 7-8 pounds per acre. Make application from September to March depending on altitude and local recommendations. Apply at 3 to 4 week intervals depending on disease severity and rainfall conditions.

CRANBERRY, Fruit Rot. Apply at 8 pounds per acre beginning in late bloom. One or two additional applications made at 10 to 14 day intervals may be required, depending on disease pressure. Follow the advice of the State Agricultural Extension Service.

CUCUMBERS, Angular Leaf Spot & Downy Mildew. Apply weekly once the plants begin to vine. Use at 1.5 to 2 pounds per acre.

CURRENTS & GOOSEBERRY, Leaf Spot. Make three applications of KOCIDE 101 at 10 pounds per acre, starting after harvest, before bloom and after petal fall.

EGGPLANT, *Alternaria* Blight, Anthracnose, *Phomopsis*. Use 2 pounds KOCIDE 101 per acre before disease appears. Repeat at 7 to 10 day intervals (EXCEPT CALIFORNIA).

FILBERTS, *Bacterial Blight*. Apply 4-6 pounds plus 1 pint superior-type oil per 100 gallons in late August or early September. In seasons of heavy rainfall, apply another spray when three-fourths of the leaves have dropped.

GRAPES, Black Rot, Powdery Mildew & Downy Mildew. Apply 2 pounds KOCIDE 101 plus 2-6 pounds hydrated lime per acre as a dilute or concentrate spray. Use KOCIDE for the last one or two late summer applications following early season application of another fungicide. Follow State schedule for exact timing. (Caution: Slight to severe foliage injury may occur on copper-sensitive varieties such as Concord, Delaware, Niagara and Rosette).

HOPS, Downy Mildew. Apply 2 pounds as a fungicide crown treatment (after pruning but before training) as needed. After training additional fungicide treatments are needed at about 10 day intervals. Discontinue use 2 weeks before harvest.

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BEST DOCUMENT AVAILABLE

LETTUCE, Downy Mildew Apply 1-2 pounds KOCIDE 101 per 100 gallons of water. Begin treatment when disease first appears and repeat every 7-10 days as needed to suppress disease.

LIVE OAK, Ball Moss (Texas only) Apply at 6 pounds per 100 gallons of water, in spring after heavy rain, using 1.5 gallons of spray per foot of tree height. Make sure to wet tufts thoroughly. A second application may be required after 12 months.

MANGO (Florida), *Anthraco*se Apply monthly after fruit set until harvest at 2 pounds KOCIDE 101 per 100 gallons or 8-10 gallons per acre depending on equipment. Consult Extension Service for State recommendations.

OLIVES (California), *Peacock Spot* Make first application at 2-3 pounds per 100 gallons or at 8-12 pounds per acre depending on equipment before winter rains fall. A second application in early spring should be made if disease is severe.

ONION, Purple Blotch & Downy Mildew Apply 2 pounds KOCIDE 101 per acre when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals.

PEACHES & NECTARINES, Leaf Curl & Coryneum Blight (*Shot Hole*) Dormant application, apply at leaf fall. Dilute. Apply 2-4 pounds per 100 gallons (minimum of 8 lbs/acre). Use 16 pounds per acre when rainfall is very heavy and disease pressure is high. Concentrate. Apply at equivalent rates in approximately 100 gallons of water. May be used with agricultural spray oil. *Brown Rot Blossom Blight* Apply at 2 or 3 pounds per 100 gallons as a full cover spray at pink bud. (Application at this time also affords some control of *Leaf Curl* and *Coryneum Blight*). *Bacterial Spot* Dormant application, apply at 2 pounds per 100 gallons. Post bloom, apply 1/2 pound per 100 gallons at first and second cover sprays. Do not spray later than three weeks prior to harvest. Do not use at rates above those recommended. (Caution: Slight defoliation and spotting of leaves may occur from use in cover sprays).

PEANUTS, Cercospora Leaf Spot Begin spraying 40-45 days after planting or when disease symptoms appear. Make ground or aerial application at 1.5 to 3 pounds per acre. For aerial application use 3-10 gallons of water. Continue applications at 10-14 day intervals. Use in sufficient water to get adequate coverage. One to two quarts of a 6-pound flowable sulfur may be added.

PEARS, Fire Blight Apply at 0.25 pound per 100 gallons or 1 pound per acre at 5 day intervals throughout bloom period. *Pseudomonas Blight* Apply KOCIDE 101 before fall rains at a rate of 3-4 pounds per 100 gallons (300-400 GPA) and again at dormant before spring growth starts. Excessive dosages may cause fruit russet.

PEAS, Powdery Mildew Begin spray treatment when disease symptoms first appear. Use at 1.5 to 3 pounds per acre according to disease severity. Repeat applications at weekly intervals.

PEPPERS, Bacterial Spot When disease threatens, apply 2 to 3 pounds per acre in sufficient water for adequate coverage at 7 to 14 day intervals depending on disease severity.

PHILODENDRON, Bacterial Leaf Spot Apply weekly before disease appears at 1.5 pounds of KOCIDE 101 plus 1.5 pounds of a coordination product of maneb and zinc (80% active compound) per 100 gallons of water.

POTATOES, Early & Late Blight Apply at 7 to 10 day intervals starting when plants are six inches high until two weeks before harvest. Use 1 to 1.5 pounds per acre in those locations where disease is light and up to 3-4 pounds per acre where disease is more severe.

PUMPKIN & SQUASH, Powdery Mildew Begin applications when plants are 3 weeks old or when first disease symptoms appear. Use at weekly intervals at 1.5 to 3 pounds per acre depending on disease severity.

STRAWBERRIES, Leaf Spot & Leaf Blight Apply at 2-3 pounds in 100 gallons per acre. Begin application when plants are established and continue on a weekly schedule throughout season. Discontinue applications if signs of phytotoxicity appear.

SUGAR BEETS, Cercospora Leaf Spot Start spray when disease threatens and continue for 4 to 5 applications. Spray 10-14 days depending on weather conditions at 2 to 5 pounds per acre depending on disease severity. Addition of suitable agricultural spray oil is recommended at 2 quarts per acre.

SYCAMORE, Anthracnose Make two applications using 2-3 pounds per 100 gallons as a full cover spray. Make first application at bud crack and second application 7-14 days later at 10% leaf expansion.

TOMATOES, Early Blight When disease threatens, apply 2-3 pounds per acre at 7-10 day intervals. *Bacterial Speck* Apply at 2 pounds per acre at 10-30 day intervals beginning when the disease threatens. Use more frequent applications when disease pressure is high. *Bacterial Spot* When disease threatens, apply 2-4 pounds per acre at 7-10 day intervals, more frequently when disease is severe. May be combined with 1.5 to 2 pounds per acre maneb or coordination product of maneb and zinc (80% active compound). When maneb or the coordination product of zinc and maneb is used in combination, do not apply within five days of harvest.

WALNUT, Walnut Blight Apply first spray at early pre-bloom when catkins are partially expanded. Make three additional applications during bloom and early nutlet stage at 7-10 day intervals. Additional applications may be necessary when frequent rainfall occurs. Dilute. Apply 2 pounds per 100 gallons water (minimum of 8 lbs/acre). Concentrate: Apply at equivalent rates in 50-100 gallons water per acre. One pint of summer oil emulsion may be added per 100 gallons of spray. Do not apply more than 12.5 pounds per acre per application.

WATERMELON, Anthracnose & Downy Mildew Apply as soon as plants become established and at weekly intervals thereafter. *Anthracnose* Use at 2 pounds per acre. *Downy Mildew* Use at 1.5 to 3 pounds per acre, according to disease severity.

WHEAT AND BARLEY, Septoria Leaf Blotch & Helminthosporium Spot Blotch Apply 1.5 to 2 pounds per acre. Make first application at early heading and follow with second application 10 days later.



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