352-684 06-10-2009 1/22

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:	Date of Issuance:
352-684	JUN 10 2009

Terms of Issuance: Conditional

NOTICE OF PESTICIDE:
___ Registration
XX Reregistration
(under FIFRA, as amended)

Name of Pesticide Product: Kocide 4.5LF

Name and Address of Registrant (include ZIP Code):
Kristi Barnett
DuPont Crop Protection
Stine Haskell Research Center
P.O. Box 20
Newark, NJ 19714-0030

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

Based on your response to the Reregistration Eligibility Document(s), EPA has reregistered the product listed above. This action is taken under the authority of section 4(g)(2)(c) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain the registration of your product. Within 45 days from this notice, submit two copies (one highlighting changes) of a final printed label (include copy of this notice), which makes the following changes:

(continued page 2)

Signature of Approving ~~Official~~:

Tony Kish, Product Manager (22)
Registration Division, Fungicide Branch

Date: JUN 10 2009

EPA Form 8570-6

1. On page 1:

A. Change "Avoid contact with skin, eyes, or clothing" to "Do not get in eyes, skin, or on clothing".

B. Change "Protective eyewear" to "Protective eyewear such as safety glasses, goggles, or face shield".

C. Delete "Certain water conditions…aquatic organisms" because this is not for applications to water bodies for algae control.

2. On page 2:

A. In the Ag Use Requirements box, to match the PPE on page 1, replace "coveralls" with "long-sleeved shirt and long pants", and change "Protective eyewear" to "Protective eyewear such as safety glasses, goggles, or face shield".

B. In "Special Precautions" change "No label dosage rates should be exceeded" to "Do not exceed label dosage rates".

3. On page 3, there is a dash and no number for the concentrate volume for field crops and vegetables. Add a clarification as to what the dash means (eg not applicable, not recommended, etc). Also, move the title "Aerial" to be directly above its column (it's now too far above).

4. As per the RED, spray drift text must be added to the label and must read as follows:

"**SPRAY DRIFT MANAGEMENT**
A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet size
Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed
Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are not sensitive areas within 250 feet downwind.

Temperature Inversions
If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

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

Equipment
All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

Additional requirements for aerial applications:
- The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
- When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind...

Additional requirements for ground boom application
Do not apply with a nozzle height greater than 4 feet above the crop canopy."

5. You must exactly follow the RED label table's maximum rates, intervals, etc. You are responsible for the following changes, as well as items not mentioned herein per the RED. Add any missing retreatment intervals, correct maximum rates depending on the growth stages, etc. If we did not list all affected crops check the label and make changes to affected crops.

A. Citrus, corn, peanuts, potato, sugar beets, blueberry, cranberry, currant/gooseberry, almond, apple, banana, cacao, coffee, filbert, pear, pecan, pistachio, quince, walnut , bean, beet, carrot, celery/celeriac, crucifers, cucurbit, eggplant, okra, onion/garlic, pea, pepper, spinach, tomato, watercress, grape, chives, dill, ginseng, mamey sapote, papaya, parsley and ornamentals: The text "or as needed," or "continue as needed" type statements conflict with the required minimum retreatment interval and must be deleted. Add any missing retreatment intervals as per the RED.

B. Citrus: A 7 day minimum retreatment interval must be added for all uses to citrus.

C. Almond, apricot, cherry, plum, prune: A retreatment interval of 7 days must be added to the label for dormant/late dormant use, and a retreatment interval of 5 days must be added for use during the bloom/growing season with a max rate of 4 pints per application (vs 5 1/3 and 8 pts).

D. For almond, apricot, cherry, plum, prune, the directions to treat cherry leaf spot at petal fall must be revised to add the minimum growing season 5 day retreatment interval.

E. Apple: Delete the 2nd horizontal line in the lower apple scab rate.

F. Olive: Add "30 day retreatment interval."

G. Peach/Nectarine: Add a 7 day retreatment to the fall rains section, and a 5 day retreatment for the other two growing season sections. Under the Peach, Nectarine section, revise the "5 1/3 -8 pts" rate to be "4.0 pts", per the RED.

H. Hops: The text "at about" must be deleted from "...additional treatments are needed at about 10 day intervals.". Change to be an "if needed" type statement, or similar.

I. Chives and Dill: Add "Not for use in California.", if applicable.

J. Macadamia: Add a 7 day minimum retreatment interval to the directions to treat macadamia for control of Phytophthora blight.

K. Greenhouse and Shadehouse Crops: The text "repeat as needed" must be replaced with the appropriate minimum retreatment interval for each crop listed on the label.

6. Change the Container Disposal section to be in compliance with PR 2007-4.

7. On page 14 confirm the math that one tbsp of product/1000 sq ft = 1 pint/A.

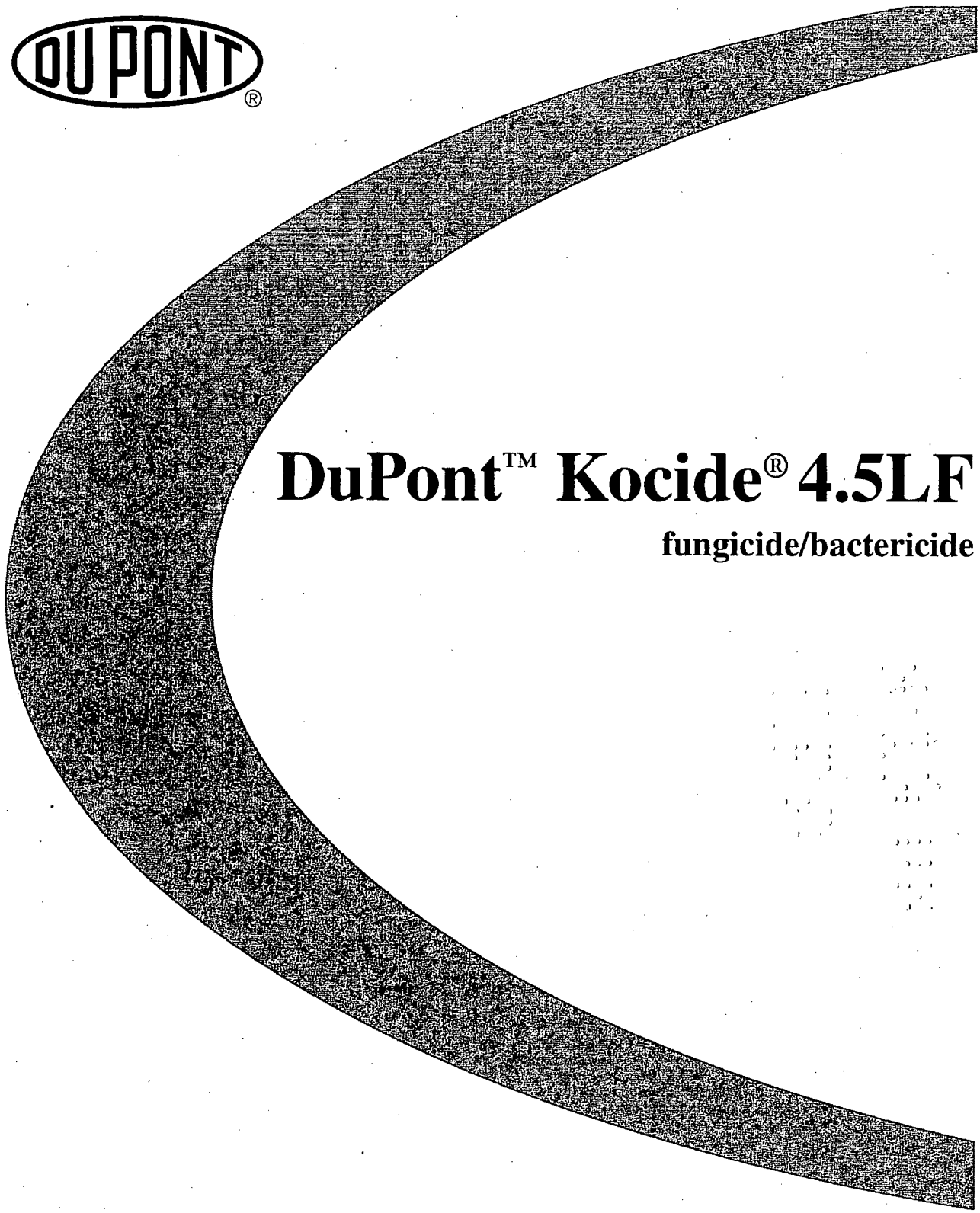
8. Products released for shipment after 12 months from the date of this Notice or at the next printing of the label, whichever occurs first, must bear this new revised label

9. Because there is a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance. As an alternative, you may refer consumers to the company's phone number or e:mail address

10. Failure to adequately respond within the 45 day timeframe may result in either a Notice of Intent to Suspend or a Notice of Intent to Cancel affecting the registration of the subject product, as appropriate.

H-

5/22



DuPont™ Kocide® 4.5LF

fungicide/bactericide

DRAFT LABEL

DUPONT®

DuPont™ Kocide® 4.5LF

fungicide/bactericide

Active Ingredient	*By Weight*
Copper Hydroxide* (CAS No. 20427-59-2)	37.5%
Inert Ingredients	62.5%
TOTAL	100.0%

*(Metallic Copper Equivalent 24.4% or 3.0 Pounds Metallic Copper per Gallon)

(4.5 Pounds Copper Hydroxide per Gallon)

EPA Reg. No. 352-684

EPA Est. No.

NET CONTENTS: _____

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

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 skin, eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection sheet.

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material, such as polyvinyl chloride, nitrile rubber or butyl rubber
- Shoes plus socks
- Protective eyewear

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

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing. Wash the outside of gloves before removing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. For terrestrial uses, 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 wash-waters or rinsate.

Certain water conditions including low pH ($\leq$6.5), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e., alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms.

Drift and runoff may be hazardous to aquatic organisms in waters adjacent to treated areas.

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 State or Tribal 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 48 hours without required PPE.

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material, such as polyvinyl chloride, nitrile rubber or butyl rubber
- 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.

Do not enter or allow others to enter until sprays have dried.

GENERAL INSTRUCTIONS

DuPont™ KOCIDE® 4.5LF 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® 4.5LF 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® 4.5LF. 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® 4.5LF label for specific rates and timing of application by crop. Where application rates and intervals are provided in a range (e.g. 3 to 8 pints and 7 to 10 days), the 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® 4.5LF 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® 4.5LF with "Aliette" fungicide for use on any registered crops unless appropriate precautions have been taken to buffer the spray solution because severe phytotoxicity may result. Use in accordance with the most restrictive of label limitations and precautions. 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® 4.5LF 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, it is advisable to test for compatibility and potential crop injury prior to commercial use of a new tank mix; otherwise, tank mixing should not be undertaken.

- It must be determined if proper application equipment is available and if waste associated with its use can be properly handled. Agricultural chemicals are often reactive with the materials used in the construction of application equipment, such as aluminum, rubber and some synthetic materials. This factor should be taken into consideration when selecting proper application equipment. It is necessary that all application equipment be thoroughly flushed with clean water after each day's use.
- Do not apply this product through any irrigation (chemigation) system using aluminum parts or components as damage to the system may occur. Such application is prohibited regardless of whether the irrigation system is flushed with water after use of this product.
- Apply this product only through one or more of the following types of systems: sprinkler, including center pivot, lateral move, traveler, big gun, or plastic pipe solid set system(s) which contain no aluminum parts or components. Do not apply this product through any other type of irrigation system.
- While volume is important in obtaining full spray coverage, often factors such as foliage density, environmental conditions and sprayer calibration have a greater impact. Always be sure that sprayers are calibrated to spray equipment manufacturer's specifications and environmental conditions are within those recommended by State and local regulatory authorities.
- When mixing, fill the spray tank one-half full with water. Add DuPont™ KOCIDE® 4.5LF 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 labels of all products used in mixtures.

CROP CLASSIFICATION

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

FIELD CROPS: Alfalfa, Barley, Oats, Peanut, Potato, Sugar Beet 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, Beet Greens, Broccoli, Brussels Sprout, Cabbage, Cantaloupe, Carrot, Cauliflower, Celeriac*, Celery, Cucumber, Eggplant, Greens (Collard, Mustard and Turnip), Honeydew, Muskmelon, Onion/Garlic, Pea, Pepper, Pumpkin, Spinach, Squash, 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: Barley, Rice and Wheat.

GREENHOUSE AND SHADEHOUSE CROPS: KOCIDE® 4.5LF 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.

*Not registered for use in California

Minimum Recommended Spray Volume (Gallons Per Acre)

When Applying KOCIDE® 4.5LF

	Aerial	Ground	
		Dilute	Concentrate
Citrus	10	800	100**
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

**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 gallons per acre 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® 4.5LF 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 DuPont™ KOCIDE® 4.5LF and applying to citrus during the post bloom period when young fruit are present may result in spray burn.

Disease	Rate/Acre	Maximum Seasonal Rate/Acre	Use Instructions
Algal Spot, Melanose, Scab	2 2/3-8 pts.	33.6 pts.	Apply as pre-bloom and post-bloom sprays. Use the higher rates when conditions favor disease.
Greasy Spot, Pink Pitting	1 1/3-4 pts.	33.6 pts.	Apply in summer on expanded new flush. Repeat on subsequent flushes where disease pressure is severe. Use the higher rates when conditions favor disease.
Alternaria Brown Spot	2 2/3-5 1/3 pts.	33.6 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 7 to 21 day schedule or as needed. Use the higher rates when conditions favor disease.
Phytophthora Brown Rot, Septoria Spot	2 2/3-5 1/3 pts.	33.6 pts.	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 Spot or where fruit have already been infected with Brown Rot, apply to entire tree. Apply also to bare ground one foot beyond skirt. Use the higher rates when conditions favor disease. **NOTE**: In California, in areas subject to copper injury,add 1/3 to 1 pound of high quality lime per pound of KOCIDE® 4.5LF .
Phytophthora Foot Rot	2/3 pt	33.6 pts.	Mix with 1 quart 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. **NOTE**: Areas where microjet or low volume irrigation hit the tree trunk may require retreatment due to wash off.
Citrus Canker (suppression)	8 pts.	33.6 pts.	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: Phytoxicity may occur on young tender flush when KOCIDE® 4.5LF is applied to citrus seedlings 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 2 2/3 to 5 1/3 pints of KOCIDE® 4.5LF per acre. Apply KOCIDE® 4.5LF at 28 day intervals or as needed depending on disease severity.

10/22

FIELD CROPS

Crop	Disease	Rate/Acre	Maximum Seasonal Rate/Acre	Use Instructions
Alfalfa	Cercospora Leaf Spot, Leptosphaerulina Leaf Spot	1 1/3 pts	3 pts.	Apply 10 to 14 days before each harvest or earlier if disease threatens. Repeat every 30 days if needed. **NOTE**: Spray injury may occur with sensitive varieties such as Lahontan.
Peanut	Cercospora Leaf Spot	1-2 pts.	12.6 pts.	Begin spraying at 35 to 40 days after planting or when disease symptoms first appear and repeat at 7 to 14 day intervals or as needed. Reduce sprays to 7 day intervals during humid weather. Use the higher rates when conditions favor disease. Flowable sulfur may be added.
Potato	Early Blight, Late Blight	2/3-2 2/3 pts.	66.7 pts.	Apply 2/3 to 1 pint per acre at 5 to 10 day intervals or as needed starting when plants are 2 to 6 inches high in locations where disease is light. Apply up to 2 2/3 pints per acre when disease is more severe. Under conditions of severe disease, control with DuPont™ KOCIDE® 4.5LF 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.
Sugar Beet	Cercospora Leaf Spot	1 1/3-3 1/3 pts.	21 pts.	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals or as needed. Use the higher rates when conditions favor disease. Addition of a spreader/sticker is recommended.
Wheat, Barley, Oats	Helminthosporium Spot Blotch, Septoria Leaf Blotch	1-1 1/3 pts	2.8 pts.	Make first application at early heading and follow with second spray 10 days later. Use the higher rates when conditions favor disease.

SMALL FRUITS

Crop	Disease	Rate/Acre	Maximum Seasonal Rate.Acre	Use Instructions
Blackberry (Aurora, Boysen, Cascade, Chehalem, Logan, Marion, Santiam, Thornless Evergreen)	Anthracnose, Cane Spot, Leaf Spot, Pseudomonas Blight, Purple Blotch, Yellow Rust	2 2/3 pts.	26.7 pts.	Make fall application after harvest. Apply delayed dormant spray after pruning/training in the spring. If needed, agricultural-type spray oil may be added.
	Anthracnose, Cane Spot, Leaf Spot, Purple Blotch, Yellow Rust	1 1/3 pts.	26.7 pts.	Apply when leaf buds begin to open and repeat when flower buds show white. Repeat on a 7 day interval if needed. If needed, agricultural-type spray oil may be added. **NOTE**: 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	2 2/3-5 1/3 pts.	22.4 pts.	Make first application before fall rains and a second application 4 weeks later. Use the higher rates when conditions favor disease.
	Fruit Rot, Phomopsis Twig Blight	4 pts.	22.4 pts.	Dormant Application: Begin applications when bloom buds begin to swell. Make additional applications at 7 to 14 day intervals or as needed before blooms open.
Cranberry	Fruit Rot	5 1/3 pts.	16.8 pts.	Make first application in late bloom. Apply one or two additional applications at 7 to 14 day intervals or as needed depending on disease severity.
	Rose Bloom	5 1/3 pts.	16.8 pts.	Apply three sprays on 7 to 14 day schedule or as needed as soon as symptoms are observed.
	Bacterial Stem Canker	5 1/3 pts.	16.8 pts.	Apply postharvest and again in spring at bud swell. Apply one or two additional applications at 7 to 14 day intervals or as needed depending on disease severity.
	Leaf Blight, Red Leaf Spot, Stem Blight, Tip Blight (*Monilinia*)	5 1/3 pts.	16.8 pts.	Apply delayed dormant spray in the spring. Repeat at 7 to 14 day intervals or as needed through pre-bloom.
Currant, Gooseberry	Anthracnose, Leaf Spot	6 2/3 pts.	26.7 pts.	Make initial application after first leaves have expanded. Continue on a 10 to 14 day schedule or as needed during wet conditions in the spring. Make an additional application after harvest.
Raspberry	Anthracnose, Cane Spot, Leaf Spot, Pseudomonas Blight, Purple Blotch, Yellow Rust	2 2/3 pts.	26.7 pts.	Make fall application after harvest. Apply delayed dormant spray after training in the spring. If needed, agricultural-type spray oil may be added.
	Anthracnose, Cane Spot, Leaf Spot, Purple Blotch, Yellow Rust	1 1/3 pts.	26.7 pts.	Apply when leaf buds begin to open and repeat when flower buds show white. Repeat on a 7 day interval if needed. If needed, agricultural-type spray oil may be added. **NOTE**: 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	Angular Leaf Spot (*Xanthomonas*), Leaf Blight, Leaf Scorch, Leaf Spot	1 1/3-2 pts.	21.8 pts.	Begin application when plants are established and continue on a weekly schedule throughout the season. Apply in at least 20 gallons of water. Use the higher rates when conditions favor disease. **NOTE**: Discontinue applications if signs of crop injury appear.

*Not registered for use in California

TREE CROPS

Crop	Disease	Rate/Acre	Maximum Seasonal Rate/Acre	Use Instructions
Almond, Apricot, Cherry, Plum, Prune	Bacterial Blast (*Pseudomonas*), Bacterial Canker, Coryneum Blight (Shot Hole)	5 1/3-10 2/3 pts	48 pts.	Make first application before fall rains and a second at late dormant. Use the higher rates when conditions favor disease. If needed, agricultural-type spray oil may be added. For Cherries: Where disease is severe, an additional application shortly after harvest may be required. Almond Only: For bacterial blast control in sprinkler irrigated orchards or where disease is severe, apply 1 1/3 pints per acre post-bloom at 5 to 14 day intervals or as needed or just before sprinkling. **NOTE**: Foliar injury may occur from post-bloom sprays on almonds, especially on NePlus varieties.
	Blossom Brown Rot, Coryneum Blight (Shot Hole)	4-5 1/3 pts. (Almond) 5 1/3-8 pts. (All Others)	48 pts.	Apply during early bloom. Do not apply after full bloom or injury may occur. Use the higher rates when rainfall is heavy and disease pressure is high.
	Black Knot (Plum)*	2 2/3-4 pts.	48 pts.	Make an application at bud swell up to early bloom for early season disease suppression. Apply before full bloom. Use the higher rates when rainfall is heavy and disease pressure is high. **NOTE**: To avoid plant injury, do not use after full bloom.
	Cherry Leaf Spot* (Sour Cherries Only)	4-5 1/3 pts.	48 pts.	Apply at petal fall as well as 1 to 2 times after petal fall. Use the lower rates where disease infection is light and use the higher rates for a dormant application or where disease infection is moderate to heavy. Do not apply to sweet cherry or the English Morello variety as severe injury will result. The addition of 1 to 3 pounds of hydrated lime per per 1 1/3 pints of DuPont™ KOCIDE® 4.5LF may reduce crop injury. **NOTE**: Moderate to severe injury such as leaf spotting and defoliation may occur from post-bloom applications.
Apple	Anthracnose, Blossom Blast, European Canker (*Nectria*), Shoot Blast (*Pseudomonas*)	8-10 2/3 pts.	42.7 pts.	Apply before fall rains. Use the higher rates when conditions favor disease. **NOTE**: Use on yellow varieties may cause discoloration. To avoid discoloration, pick before spraying.
	Apple Scab*, Fire Blight	5 1/3-10 2/3 pts.	42.7 pts.	Make application between silver-tip and green-tip. Apply as a full cover spray for early season disease suppression. **NOTE**: Moderate to severe crop injury may occur from late application; discontinue use when green-tip reaches 1/2 inch.
	Apple Scab*	1 1/3 pts.	42.7 pts.	Extended spray schedule where fruit finish is not a concern: Continued applications may be made at 5 to 7 day intervals or as needed between 1/2 inch green-tip and first cover spray. **NOTE**: Moderate to severe crop injury may result from this extended spray schedule. It is not intended for fresh market apples or for apples where fruit finish is a concern as it is likely to cause fruit russetting. The addition of 1 to 3 pounds of hydrated lime per 1 1/3 pints of KOCIDE® 4.5LF may reduce crop injury.
	Fire Blight*	2/3-1 1/3 pts.		
	Collar Rot, Crown Rot	2 2/3 pts.	42.7 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 in fall after harvest for best results. Do not apply to foliage or fruit. **NOTE**: Do not use if soil pH is below 5.5 since copper toxicity may result.

TREE CROPS (cont'd)

Crop	Disease	Rate/Acre	Maximum Seasonal Rate/Acre	Use Instructions
Avocado	Anthracnose, Blotch, Scab	5 1/3-8 pts.	50.4 pts.	Apply when bloom buds begin to swell and continue application at 14 to 30 day intervals for five to six applications. Use the higher rates when conditions favor disease.
Banana	Sigatoka (Black and Yellow)	1 1/3 pts.	50.4 pts.	Apply by air in 3 gallons of water. If needed, agricultural-type spray oil may be added. Apply on a 14 day schedule or as needed throughout the wet season. Apply at 7 to 14 day intervals or as needed during dry periods.
	Black Pitting	2 2/3 pts.	50.4 pts.	Mix in 100 gallons of water. Apply to the fruit stem and the basal portion of the leaf crown. Apply during the first and second weeks after fruit emergence.
Cacao	Black Pod	1 1/3-5 2/3 pts.	42 pts.	Begin applications at the start of the rainy season and continue while infection conditions persist. Apply 1 1/3 to 3 pints at 14 to 21 day intervals or as needed depending on disease severity.
Coffee	Coffee Berry Disease (*Colletotrichum coffeanum*)	4-5 1/3 pts.	33.6 pts.	Apply first spray after flowering and before onset of long rains and then at 14 to 28 day intervals or as needed until picking. Use the higher rates when conditions favor disease.
	Bacterial Blight (*Pseudomonas syringae*)	4-5 1/3 pts.	33.6 pts.	Begin spray program before the onset of long rainy periods and continue throughout the rainy season at 14 to 21 day intervals or as needed. The critical time for spraying to control this disease is just before, during and after flowering(s), especially when coinciding with wet weather. Use the higher rates when rainfall is heavy and disease pressure is high.
	Leaf Rust (*Hemileia vastatrix*)	1 1/3-2 2/3 pts.	33.6 pts.	Apply before the onset of rain and then at 14 to 21 day intervals or as needed while the rains continue. Use the higher rates when rainfall is heavy and disease pressure is high.
	Iron Spot (*Cercospora coffeicola*), Pink Disease (*Corticium salmonicolor*)	1 1/3 pts.	33.6 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	10 2/3-16 pts.	64 pts.	Apply as a post harvest spray. In seasons of heavy rainfall, apply a second spray when three-fourths of the leaves have dropped. Use the higher rates when rainfall is heavy and disease pressure is high. If needed, agricultural-type spray oil may be added.
	Eastern Filbert Blight	10 2/3-16 pts.	64 pts.	Apply as a dilute spray in adequate water for thorough coverage. Make applications starting at bud swell to bud break and continue at 2-week intervals or as needed until early May. Thorough coverage is essential. Use the higher rates when rainfall is heavy and disease pressure is high. If needed, agricultural-type spray oil or sticking agent may be added.
Mango*	Anthracnose	5 1/3-6 2/3 pts.	48.5 pts.	Apply monthly after fruit set until harvest. Use the higher rates when rainfall is heavy and disease pressure is high.
Olive	Olive Knot, Peacock Spot	5 1/3-8 pts.	16.8 pts.	Make first application before winter rains begin. A second application in early spring should be made if disease is severe. Apply the higher rates for heavy disease pressure or when conditions favor disease development.

*Not registered for use in California
**Permitted only in the states of Washington and Oregon

TREE CROPS (cont'd)

Crop	Disease	Rate/Acre	Maximum Seasonal Rate/Acre	Use Instructions
Peach, Nectarine	Bacterial Blast (*Pseudomonas*), Bacterial Canker, Bacterial Spot (*Xanthomonas*), Coryneum Blight (Shot Hole), Leaf Curl	5 1/3-10 2/3 pts.	48 pts.	Make first application before fall rains and a second at late dormant. For peach leaf curl, late dormant application must be made before leaf buds swell. Use the higher rates when rainfall is heavy and disease pressure is high. If needed, agricultural-type spray oil may be added.
	Blossom Brown Rot, Coryneum Blight (Shot Hole), Leaf Curl	5 1/3-8 pts.	48 pts.	Full cover spray at pink bud. Use the higher rates when conditions favor disease.
	Bacterial Spot	2/3 pt.	48 pts.	Post-bloom application applied at first and second cover sprays. **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	2/3 pt.	42.7 pts.	Apply at 5 day intervals or as needed throughout the bloom period. **NOTE**: Russetting may occur in copper sensitive varieties. Excessive dosages may cause fruit russet on any variety.
	Blossom Blast (*Pseudomonas*)	8-10 2/3 pts.	42.7 pts.	Apply before fall rains and again during dormancy before spring growth starts. Use the higher rates when disease pressure is high or when conditions favor disease development.
Pecan	Kernel Rot, Shuck Rot (*Phytophthora cactorum*), Zonate Leaf Spot (*Cristulariella pyramidalis*)	1 1/3-2 2/3 pts.	22.4 pts.	For suppression, apply in sufficient water to ensure complete spray coverage at 2 to 4 week intervals or as needed, starting at kernel growth and continue until shucks open. Use the higher rates and shorter spray intervals if frequent rainfall occurs.
Pistachio	Botryosphaeria Panicle and Shoot Blight, Botrytis Blight, Late Blight (*Alternaria alternata*), Septoria Leaf Blight	2 2/3-5 1/3 pts.	22.4 pts.	Make initial application at bud swell and repeat on a 14 to 28 day schedule or as needed. If disease conditions are severe, use the higher rates and shorter spray intervals.
Quince*	Fire Blight	2/3 pt.	42.7 pts.	Apply at 5 day intervals or as needed throughout the bloom period. Apply in adequate water for thorough coverage.
Walnut	Walnut Blight	5 1/3-8 pts.	67.2 pts.	Apply first spray at early pre-bloom prior to or when catkins are partially expanded. Make additional applications during bloom and early nutlet stage on a 7 day interval or as needed when frequent rainfall or extended periods of moisture occur. Thorough coverage of catkins, leaves and nutlets is essential for effective control. **NOTE**: Adequate control may not be obtained when copper tolerant species of *Xanthomonas* bacteria are present.

*Not registered for use in California

VEGETABLES

Crop	Disease	Rate/Acre	Maximum Seasonal Rate/Acre	Use Instructions
Bean (Dry, Green)	Brown Spot, Common Blight, Halo Blight	2/3-2 pts.	12.6 pts.	For protective sprays, make first application when plants are 6 inches high; repeat on a 7 to 14 day schedule or as needed depending on environmental conditions. Use the higher rates for more severe disease.
Beet (Table Beet, Beet Greens)	Cercospora Leaf Spot	1 1/3-3 1/3 pts.	21 pts.	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals or as needed. Use the higher rates when conditions favor disease.
Carrot	Alternaria Leaf Spot, Cercospora Leaf Spot	1 1/3 pts.	13.3 pts.	Begin applications when disease first threatens and repeat at 7 to 14 day intervals or as needed depending on disease severity.
Celery, Celeriac*	Bacterial Blight, Cercospora Early Blight, Septoria Late Blight	1 1/3 pts.	14.1 pts.	Begin applications as soon as plants are first established in the field, repeating at 5 to 7 day intervals or as needed depending on disease severity and environmental conditions.
Crucifers (Broccoli, Brussels Sprout, Cabbage, Cauliflower, Collard Greens, Mustard Greens, Turnip Greens)	Black Leaf Spot (*Alternaria*), Black Rot (*Xanthomonas*), Downy Mildew	2/3-1 1/3 pts.	7.1 pts.	Apply at 7 to 10 day intervals or as needed. Begin applications after transplants are set in the field, or shortly after emergence of field seeded crops or when conditions favor disease development. Use the 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.
Cucurbits (Cantaloupe, Cucumber, Honeydew, Muskmelon, Pumpkin, Squash, Watermelon)	Alternaria Leaf Spot, Angular Leaf Spot, Anthracnose, Downy Mildew, Gummy Stem Blight, Powdery Mildew, Watermelon Bacterial Fruit Blotch (suppression)	1-2 pts.	14 pts.	Begin applications prior to disease development and continue while conditions are favorable for disease development. Repeat at 5 to 7 day intervals or as needed. Use the higher rates when conditions favor disease. **NOTE**: Crop injury may occur from application at higher rates and shorter intervals. Discontinue use if injury occurs.
Eggplant	Alternaria Blight, Anthracnose, Phomopsis	1 1/3 pts.	21.1 pts.	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals or as needed depending on disease severity.
Onion, Garlic	Bacterial Blight, Downy Mildew, Purple Blotch	1 1/3 pts.	16 pts.	Begin when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals or as needed depending on disease severity. Can cause phytotoxicity to leaves.
Pea	Powdery Mildew	1-2 pts.	10.5 pts.	Begin applications when disease symptoms first appear and repeat at weekly intervals or as needed. Use the higher rates when conditions favor disease.
Pepper	Anthracnose, Bacterial Spot, Cercospora Leaf Spot	1 1/3-2 pts.	31.6 pts.	Begin applications when conditions first favor disease development and repeat at 3 to 10 day intervals or as needed depending on disease severity. Use the higher rates when conditions favor disease.
Spinach	Anthracnose, Blue Mold, Cercospora Leaf Spot, White Rust	1 1/3-2 pts.	10.5 pts.	Begin application when disease first appears or when conditions favor disease development. Repeat at 7 to 10 day intervals or as needed. Use the higher rates when conditions favor disease. **NOTE**: Flecking may occur on Spinach leaves.

*Not registered for use in California

VEGETABLES (cont'd)

Crop	Disease	Rate/Acre	Maximum Seasonal Rate/Acre	Use Instructions
Tomato	Anthracnose, Bacterial Speck, Bacterial Spot, Early Blight, Gray Leaf Mold, Late Blight, Septoria Leaf Spot	1 1/3 pts.	46.4 pts.	Begin applications when disease first threatens and repeat at 3 to 10 day intervals or as needed depending on disease severity. Use the higher rates when conditions favor disease.
Watercress*	Cercospora Leaf Spot	1 1/3 pts.	5.6 pts.	Begin applications when plants are first established in the field, repeating at 7 to 14 day intervals or as needed depending on disease severity. 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	Maximum Seasonal Rate/Acre	Use Instructions
Grape	Black Rot, Downy Mildew, Phomopsis, Powdery Mildew	1 1/3-2 2/3 pts.	53.3 pts.	Begin applications at bud break with subsequent applications throughout the season depending on disease severity. Repeat at 3 day intervals or as needed. Use the higher rates when conditions favor disease. **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 1 1/3 pints of DuPont™ KOCIDE® 4.5LF.
Hops	Downy Mildew	1 1/3 pts.	7.1 pts.	Make crown treatment after pruning, but before training. After training, additional treatments are needed at about 10 day intervals **NOTE**: Discontinue use two weeks before harvest.
Kiwi	*Erwinia herbicola*, *Pseudomonas fluorescens*, *Pseudomonas syringae*	5 1/3 pts.	16.8 pts.	Apply in 200 gallons of water per acre. Make applications on a monthly basis. A maximum of three applications may be made.

SEED DRESSING

Except California

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

Crop	Disease	Rate/Acre	Use Instructions
Barley, Wheat	*Pseudomonas syringae*, *Tilletia caries*, *Xanthomonas translucens*	2 fl. ounces per 100 pounds of seed	When using a seed treating machine, dilute with sufficient water to assure uniform coverage. Consult State Agricultural Experiment Station regarding specific recommendations.
Rice	*Achlya sp.*, *Pythium sp.*	2-4 fl. ounces per 100 pounds of seed	When using a seed treating machine, dilute with sufficient water to assure uniform coverage. Consult State Agricultural Experiment Station regarding specific recommendations.

*Not registered for use in California

MISCELLANEOUS

Crop	Disease	Rate/Acre	Maximum Seasonal Rate/Acre	Use Instructions
Atemoya*	Anthracnose	2-3 pts.	33.6 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 the higher rates for severe disease.
Carambola*	Anthracnose	4-5.6 pts.	28 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 the higher rates for severe disease.
Chives	Downy Mildew	1 1/3 pts.	7.1 pts.	Begin applications when plants are established in the field. Repeat applications every 7 to 10 days or as needed depending on disease conditions.
Dill	Phoma Leaf Spot, Rhizoctonia Foliage Blight	1 1/3-2 pts.	10.5 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 the higher rates when conditions favor disease.
Douglas Fir	Rhabdocline Needlecast	1 1/3-2 pts.	53.3 pts.	Begin applications at bud break and repeat at 3 to 4 week intervals or as needed. Use the higher rates for severe disease.
Ginseng	Alternaria Leaf Blight, Stem Blight	1 2/3-2 2/3 pts.	14 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 DuPont™ KOCIDE®-"Rovral" applications as soon as plants have emerged in spring. Applications should be repeated every 7 days or as needed until plants become dormant in fall. Apply fungicides at least 8 hours before rain. 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 of 2 to 4 year old Ginseng. It is very important that the stems be thoroughly covered with fungicide; therefore, use a spray apparatus which distributes the fungicide throughout the canopy.
Guava	Anthracnose, Red Algae	2-3 pts.	13.1 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 the higher rates for severe disease.
Litchi*	Anthracnose	2-3 pts.	13.1 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 the higher rates for severe disease.
Live Oak, Pecan	Ball Moss	4-5 1/3 pts.	53.3 pts.	Apply in 100 gallons of water in the spring when ball moss is actively growing using 1.5 gallons of spray per foot of tree height. Make sure to wet ball moss tufts thoroughly. A second application may be required after 12 months. **NOTE**: KOCIDE® 4.5LF may be injurious to ornamentals grown under Live Oaks or Pecans. 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.

*Not registered for use in California

MISCELLANEOUS (cont'd)

Crop	Disease	Rate/Acre	Maximum Seasonal Rate/Acre	Use Instructions
Macadamia	Anthracnose	4-6 pts.	25.2 pts.	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 the higher rates for severe disease.
	Phytophthora Blight (*P. capsici*), Raceme Blight (*Botrytis cinerea*)	3-4 pts.	25.2 pts.	Apply during raceme development and bloom periods. Apply in sufficient water for thorough coverage. Use the higher rates when conditions favor disease.
Mamey Sapote*	Algal Leaf Spot, Anthracnose	4-5 1/3 pts.	22.4 pts.	Apply when conditions favor disease development. Repeat on 14 to 30 day schedule or as needed as disease severity and environmental conditions dictate. Use the higher rates when conditions favor disease.
Papaya*	Anthracnose	2 2/3- 6 2/3 pts.	56.5 pts.	Apply before disease appears. Apply at 14 day intervals or as needed. The addition of an approved spreader is desirable. Use the higher rates when conditions favor disease.
Parsley*	Bacterial Blight (*Pseudomonas* sp.)	2 pts.	5.3 pts.	Begin applications when plants are first established in the field and repeat at 10 day intervals or as needed depending on disease severity and environmental conditions.
Passion Fruit*	Anthracnose	4-6 pts.	25.2 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 the higher rates when conditions favor disease.
Sugar Apple* (*Annona*)	Anthracnose	8 pts.	33.6 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 the higher rates when conditions favor disease.
Sycamore	Anthracnose	1 1/3-2 pts.	53.3 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 the higher rates when conditions favor disease.

*Not registered for use in California

GREENHOUSE AND SHADEHOUSE CROPS

Notice to User: DuPont™ KOCIDE® 4.5LF may be used in greenhouses and shadehouses to control diseases on crops which appear on this label, and specific instructions have been developed for the crops listed. The grower should bear in mind that the sensitivity of crops grown in greenhouses and shadehouses differs greatly from crops grown under field conditions. Neither the manufacturer nor seller has determined whether or not KOCIDE® 4.5LF can be used safely on all greenhouse and shadehouse grown crops. Consequently; injury arising from the use of KOCIDE® 4.5LF on these types of greenhouse and shadehouse crops is the responsibility of the user. The user should determine if KOCIDE® 4.5LF 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® 4.5LF according to specific rates given for those crops in pints per acre. **One tablespoon of KOCIDE® 4.5LF per 1,000 square feet is equivalent to 1 pint per acre.** KOCIDE® 4.5LF should be applied in adequate water for thorough coverage of plant parts. Begin application at first sign of disease and repeat as needed; use shorter spray intervals during periods when severe disease conditions persist. For maximum seasonal rates per acre, refer to the crop specific directions.

NOTE: Phytotoxicity may occur on young tender flush when KOCIDE® 4.5LF is applied to citrus seedlings grown in greenhouses or shadehouses.

Crop	Disease	Rate per 1000 Sq Ft	Use Instructions
Citrus (Non-Bearing Nursery)	Brown Rot, Citrus Canker, Greasy Spot, Melanose, Pink Pitting, Scab	3 TBSP	Begin applications when disease first threatens. Repeat at 7 to 30 day intervals or as needed depending on disease severity.
Cucumber	Angular Leaf Spot, Downy Mildew	1-2 TBSP.	Apply at 5 to 7 day intervals when plants begin to vine. Use the higher rates when conditions favor disease.
Eggplant	Alternaria Blight, Anthracnose; Phomopsis	1 1/2 TBSP	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 1/2-2 TBSP.	Begin applications when conditions first favor disease development and repeat at 3 to 10 day intervals or as needed depending on disease severity. Use the higher rates when conditions favor disease.
Tomato	Anthracnose, Bacterial Speck, Bacterial Spot, Early Blight, Gray Leaf Mold, Late Blight, Septoria Leaf Spot	1 1/2-3 TBSP.	Begin applications when disease first threatens and repeat at 3 to 10 day intervals or as needed depending on disease severity. Use the higher rates when conditions favor disease.

TREE WOUND DRESSING

DuPont™ KOCIDE® 4.5LF may be sprayed or painted over dressed wounds and cuts in tree bark to seal the wound and help prevent bacterial and fungus infections of the tree. Spray or paint an even coat of KOCIDE® 4.5LF over tree wounds or cuts. One coat of KOCIDE® 4.5LF should protect wounds or cuts for up to one year or until average size wounds have healed.

KOCIDE® 4.5LF has been extensively researched; however, testing has not been conducted on all species or cultivars, or under all growing conditions. In some instances performance characteristics may vary.

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 systems: sprinkler, including center pivot, lateral move, traveler, big gun, or plastic pipe solid set system(s) which contain no aluminum parts or components. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from 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® 4.5LF 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 if proper application equipment is available and if waste associated with its use can be properly handled. Agricultural chemicals are often reactive with the materials used in the construction of application equipment, such as aluminum, rubber and some synthetic materials. This factor should be taken into consideration when selecting proper application equipment. It is necessary that all application equipment be thoroughly flushed with clean water after each day's use.

When mixing, fill the nurse tank half full with water. Add KOCIDE® 4.5LF slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all precautions and limitations on the labels of all products used in mixtures. Agitation of the mixture in the nurse tank is recommended.

KOCIDE® 4.5LF should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Shut off injection equipment after treatment and continue to operate irrigation system until KOCIDE® 4.5LF has been cleared from the last sprinkler head.

SPRINKLER CHEMIGATION

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

The pesticide injection pipeline must also contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

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

When mixing, fill the nurse tank half full with water. Add DuPont™ KOCIDE® 4.5LF slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all precautions and limitations on the labels of all products used in mixtures. Agitation of the mixture in the nurse tank is recommended.

KOCIDE® 4.5LF should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Shut off injection equipment after treatment and continue to operate irrigation system until KOCIDE® 4.5LF has been cleared from the last sprinkler head.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: 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 by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

D - 1378 090908

LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read this Limitation of Warranty and Liability Before Buying or Using This Product. If the Terms Are Not Acceptable, Return the Product at Once, Unopened, and the Purchase Price Will Be Refunded.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, DUPONT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BUYER'S OR USER'S BARGAINED-FOR EXPECTATION IS CROP PROTECTION. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, TORT OR STRICT LIABILITY), WHETHER FROM FAILURE TO PERFORM OR INJURY TO CROPS OR OTHER PLANTS, AND RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT, OR AT THE ELECTION OF DUPONT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

To the extent consistent with applicable law that allows such requirement, DuPont or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer's or user's growing crops can be made. Buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise, or be barred from any remedy.

This Limitation of Warranty and Liability may not be amended by any oral or written agreement.

For product information call: 1-888-6-DUPONT
Internet address: http://cropprotection.dupont.com/