

Acceptance stamp
on pg. 9 of 9

10163-273

3-4-2003

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Terre R. Allen
Registration Specialist
Gowan Company LLC
P.O. Box 5569
Yuma, AZ 85366-5569

MAR 4 2003

Subject: Rubigan™ E.C.
EPA Reg. No. 10163-273
Your Application dated November 26, 2002

Dear Ms Allen:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following changes are made:

1. First Aid: Because of the presence of more than 10% petroleum distillate, the acute oral statements must be revised as follows as required by PR 2001-1.

IF SWALLOWED

- Immediately call a poison control center or doctor.
 - Do not induce vomiting unless told to by a poison control center or a doctor.
 - Do not give any liquid to the person
 - Do not give anything by mouth to an unconscious person.
2. Under the "EMERGENCY ASSISTANCE" box, add a new box with the heading "NOTE TO PHYSICIAN." In this new box, place the following statement:

"This product may pose an aspiration pneumonia hazard. Contains petroleum distillate."
 3. *DIRECTIONS FOR USE:* Add a header "DIRECTIONS FOR USE" immediately after the paragraph on "Environmental Hazards" and before the paragraph starting "It is a violation of Federal Law ..."

Rubigan™ E.C.
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4. On page 2 under "Tank Mixing," add the following text to the end of the paragraph:

"This product must not be tank mixed with products containing label prohibitions against tank mixing. No label dosage rates should be exceeded and the most restrictive label limitations and precautions must be adhered to."

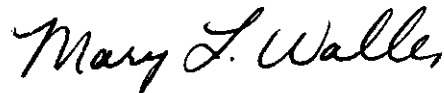
5. Delete the word "Recommendations" from all table headings and replace it with "Application Rates."

6. *General Use Precautions / Field or Container Grown Ornamentals.* Change the spelling from Crep Myrtle to Crepe Myrtle.

A stamped copy of the label is enclosed for your records. Please submit one (1) copy of the final printed label before you release the product for shipment.

If you have any questions, please call Robert Westin at (703) 305-6700.

Sincerely,



Mary L. Waller
Product Manager(21)
Fungicide Branch
Registration Division (7505C)

Enclosure

Rubigan™ E.C.

A locally systemic fungicide for the control of scab, powdery mildew and rusts of apple; scab and powdery mildew of pear; leaf spot and powdery mildew of cherry; and powdery mildew of grape; for the prevention or therapeutic control of powdery mildew in commercially grown, field or greenhouse roses and field or container grown ornamentals.

	% By Wt.
ACTIVE INGREDIENT	
Fenarimol: a-(2-chlorophenyl)-a-(4-chlorophenyl)-5-pyrimidinemethanol.....	12.0%
OTHER INGREDIENTS	88.0%
	TOTAL 100.0%

Contains 1 pound active ingredient per gallon.
Contains petroleum distillate.

KEEP OUT OF REACH OF CHILDREN WARNING – AVISO

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.)

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 continuing 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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.

Have the product container or label with you when call a poison control center or doctor, or going for treatment.

FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL TOLL FREE 1-888-478-0798.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING - AVISO

Causes substantial but temporary eye injury. Causes skin irritation. Harmful if swallowed, inhaled or absorbed through the skin. Do not get in eyes, on skin or on clothing. Avoid breathing vapor or spray mist.

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 C on an EPA chemical resistance category selections chart.

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants.
- Chemical-resistant gloves such as barrier laminate or Viton
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing or loading

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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

NET CONTENTS _____ QUART

ENVIRONMENTAL HAZARDS

This product is toxic to fish. 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 aquatic organisms in neighboring areas. Do not apply when weather conditions favor runoff or drift from the target area. Do not contaminate water when disposing of equipment wash waters.

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected workers 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 the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

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

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves such as barrier laminate or Viton
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

GENERAL INFORMATION

Rubigan E.C. fungicide is an emulsifiable concentrate formulation designed to control various foliar and fruit diseases of apple, pear, cherry and grape listed in each respective crop section. Rubigan E.C. is a locally systemic fungicide for the prevention or therapeutic control of powdery mildew on roses and field grown ornamentals. Rubigan E.C. controls susceptible fungal diseases by preventing the formation of certain sterol components and other materials necessary for their growth. Rubigan E.C. is absorbed into the plant foliage and is not easily washed off by rain or overhead irrigation. Used as directed, Rubigan E.C. will not harm the foliage or floral tissue of roses. Rubigan E.C. is compatible with most insecticides, miticides and fungicides commonly recommended for the crops listed.

Use Rubigan E.C. as a foliar spray to control the diseases listed in the apples, pears, cherries and grapes crop sections. **Note:** Use recommendations for Rubigan E.C. for all crops are made according to geographic area: **Eastern United States** (East of the Rocky Mountain continental divide); and **Western United States** (West of the Rocky Mountain continental divide). Follow use recommendations in the appropriate section for your area.

GENERAL USE PRECAUTIONS

- Do not graze cover crops treated with Rubigan E.C. or harvest forage for silage or hay.
- Apply Rubigan E.C. with ground application equipment only.
- Do not apply Rubigan E.C. through any type of irrigation system.
- Observe rate restrictions and preharvest intervals outlined for each crop.

MIXING AND APPLICATIONS DIRECTIONS

Fill the spray tank to at least one-half the required spray volume and start agitation. Add (in order) dry flowable, wettable powder and flowable (aqueous suspension) products to the spray tank. Then add the recommended rate of Rubigan E.C. followed by other emulsifiable concentrate and solution products. Allow time for thorough mixing after adding each product. Finish filling spray tank and maintain continuous agitation in the spray tank during mixing, filling and spraying operations.

Tank Mixing

For control of each disease listed in the following table, Rubigan E.C. may be used alone or in combination (tank mix) with a protectant fungicide active against each respective disease. Use the protectant fungicides at applications rates and according to their respective product labels. **Note:** Tank mix combinations of Rubigan E.C. plus a copper containing product may result in reduced effectiveness of Rubigan E.C. and are not recommended.

Use of Surfactants

When used alone, tank mix Rubigan E.C. with a surfactant. Surfactants compatible with Rubigan E.C. include R-56 Spreader Sticker, Wilbur Ellis Co.; Bio-88 Spreader Activator, Kalo Laboratories; Regulaid, Kalo Laboratories; Leafact 80A Activator, Puregro Co.; Induce, Helena Chemical Co.; LI-700, Loveland Industries; Triton B-1956, Rohm and Haas, Latron B-1956, Rohm and Haas, or others where prior use has shown compatibility. Certain states require registration of surfactants. Where applicable, verify that the surfactant is registered for agricultural use in your state.

Spray Volume and Concentration

Mix the recommended dosage of Rubigan E.C. (consult appropriate crop section for your area) in sufficient water to ensure adequate coverage and apply as a concentrate or dilute spray using ground application equipment only. Attention should be given to sprayer speed and calibration, wind speed, and tree and vine foliar canopy to ensure adequate spray coverage with Rubigan E.C.

Rate Ranges and Spray Intervals

Where a rate range is provided in use directions for Rubigan E.C., use higher rates when moderate to severe infection conditions exist or are anticipated. Where a range in the spray interval is indicated (e.g. 7 to 10 days), use the shortest spray interval within the indicated spray interval range if moderate to severe infection conditions exist. Climatic conditions, varietal susceptibility, disease history and current disease status of the orchard or vineyard must be considered when choosing rates and spray schedules for Rubigan E.C. Begin applications of Rubigan E.C. according to label directions or as recommended by your state agricultural experiment station or extension service specialist.

USE AND DOSAGE RECOMMENDATIONS

Apples and Pears: Disease Control Recommendations for Eastern United States (East of the Rocky Mountain Continental Divide)
Rubigan E.C.¹

Crop Disease (Growth stage of tree) Rubigan E.C. spray mix	Use rate per acre (fl oz)	Use rate per 100 gal of water dilute ² (fl oz)	Maximum spray interval (days)	Use Directions and Restrictions
Apples Scab (Green tip – cover sprays ³) Rubigan E.C. & protectant	8-12	3-4	7-10	<p>Scab- When Rubigan E.C. is used to control scab, at least two consecutive applications should be applied.</p> <p>Scab – Post Infection Spray Schedule: Apply "1st spray within 96 hours from the beginning of the targeted infection period. Apply the "2nd spray" within 7 days of the "1st spray". Growers who do not have access to accurate on-farm scab infection period data can not make effective use of this spray schedule.</p> <p>Tank Mixing (Rubigan E.C. and Protectant): When tank- mixed with a protectant fungicide use recommended rates of the protectant fungicide.</p> <p>Restrictions: Do not apply more than 12 fl oz of Rubigan E.C. per acre per application and more than 84 fl oz per season.</p> <p><u>Do not apply within 30 days of harvest.</u></p>
Scab – Post-Infection (Green tip – cover sprays ³) Rubigan E.C. & protectant 1 st spray 2 nd spray	8-12 8-12	3-4 3-4	7	
Powdery Mildew (Tight cluster – cover sprays)	8-12	3-4	14	
Rusts (Tight cluster – 2 nd cover spray)	8-12	3-4	7-10	
Pears Scab (Petal fall – cover sprays) Rubigan E.C. & protectant	8-12	3-4	7-10	<p>Application timing: After petal fall (see Restrictions)</p> <p>Tank Mixing (Rubigan E.C. and Protectant): When tank-mixed with a protectant fungicide use recommended rate of the protectant fungicide.</p> <p>Restrictions: Do not apply to pears until after petal fall. Such application(s) will only control scab, powdery mildew and rust infections that occur after petal fall. Do not apply more than 12 fl oz of Rubigan E.C. per acre per application and more than 84 fl oz per acre per season.</p> <p><u>Do not apply within 30 days of harvest.</u></p>
Powdery Mildew and Rusts (Petal fall – cover sprays)	8-12	3-4	14	

1. When using "tree row volume" calculations, do not apply less than 6 fl oz of Rubigan E.C. per acre. Use a surfactant when Rubigan E.C. is applied alone. See "Use of Surfactants" section in the General Information section.
2. Dilute sprays are sprayed until the point of runoff. Gallonage of dilute sprays will vary depending on tree size, density of canopy and stage of growth of the trees and tree spacing in the orchard.
3. It is recommended that Rubigan E.C. be tank mixed with a protectant fungicide for purposes of apple scab resistance management. Rubigan E.C., however, may be applied alone from green tip to tight cluster. During this period, apply Rubigan E.C. at 8-12 fl oz/acre of 3-4 fl oz per 100 gallons of water on a 7-day spray interval. If the last planned spray application of Rubigan E.C. occurs within the green tip to tight cluster window, Rubigan E.C. must be tank mixed with a protectant fungicide.

Cherries: Disease Control Recommendations for Eastern United States (East of the Rocky Mountain Continental Divide)
Rubigan E.C.¹

Crop Disease Growth Stage	Use rate per acre (fl oz)	Use rate per 100 gal. of water dilute ² (fl oz)	Maximum spray interval (days)	Use Directions and Restrictions
Cherries Leaf spot and Powdery Mildew (Petal fall – Post-harvest)	6-12	3-4	7-10	<p>Application timing: Begin applications at "petal fall" and continue until "harvest". One or two "post-harvest" applications may be made within 45 days after "harvest". If an "alternate row" spray program is used, do not exceed a 7-day spray interval.</p> <p>Restrictions: Do not apply more than 12 fl oz of Rubigan E.C. per acre per application and more than 36 fl oz per acre prior to "harvest". Rubigan E.C. may be applied up to and after "harvest"</p>

¹Use a surfactant when Rubigan E.C. is applied alone. See "Use of Surfactants" section in the General Information section.

²Dilute Sprays are sprayed until the point of runoff. Gallonage of dilute sprays will vary depending on tree size, density of canopy and stage of growth of the trees and tree spacing in the orchard.

Grapes: Disease Control Recommendations for Eastern United States (East of the Rocky Mountain Continental Divide)

Rubigan E.C.¹

Crop Disease Growth Stage	Use rate per acre (fl oz)	Maximum spray interval (days)	Use Directions and Restrictions
Grapes Powdery Mildew Pre-bloom sprays Post bloom Summer sprays	2-3 4-5 5-6	14-18 14-18 14-18	Application timing: Rubigan E.C. may be applied alone or in tank mix combinations with recommended rates of a protectant fungicide, insecticide and/or miticide. Begin applications as recommended by your State Extension Specialist or Agricultural Experiment Station, or Certified Pest Control Advisor. Use rates per acre as specified by the crop phenology. Restrictions: Do not apply more than 6 fl oz of Rubigan E.C. per acre per application and 19 fl oz per acre per season. Preharvest Interval: Do not apply within 30 days of harvest.

¹Use a surfactant when Rubigan E.C. is applied alone. See "Use of Surfactants" section in the General Information section.

Apples: Disease Control Recommendations for Western United States (West of the Rocky Mountain Continental Divide)

Rubigan E.C.¹

Crop Disease (Spray Schedule)	Use rate per acre (fl oz)	Use rate per 100 gal of water dilute ² (fl oz)	Maximum spray interval (days)	Use Directions and Restrictions
Apples Scab (Regular)	8-12	2-3	7-10	Scab- Application Timing: Begin applications at "green tip" or when environmental conditions become favorable for primary scab development. Scab - Post Infection Spray Schedule: Apply "1 st spray" within 96 hours from the beginning of the first "primary scab" infection period. Apply the "2 nd spray" within 7 days if a scab infection period has occurred within 3 days of the "1 st spray". If not, apply within 96 hours after the beginning of the next scab infection period. Growers who do not have access to accurate on-farm scab infection period data cannot make effective use of this spray schedule. Powdery Mildew: Apply Rubigan E.C. at the following stages of growth: "green tip", "pre-pink" or "pink" "petal fall" and "first cover". Restrictions: Do not apply more than 12 fl oz of Rubigan E.C. per acre per application or more than 84 fl oz per are per season. Preharvest Interval: Do not apply within 30 days of harvest.
(Post-Infection)				
1 st spray 2 nd spray	8-12 8-12	2-3 2-3	- 7	
Powdery Mildew	8-12	2-3	14	

¹When using "tree row volume" calculations, do not apply less than 6 fl oz of Rubigan E.C. per acre. When Rubigan E.C. is used for "Post-Infection" control of scab do not apply less than 8 fl oz per acre.

²Dilute sprays are sprayed until the point of runoff. Gallonage of dilute sprays will vary depending on tree size, density of canopy and stage of growth of the trees and tree spacing in the orchard.

Pears: Disease Control Recommendations for Western United States (West of the Rocky Mountain Continental Divide)

Rubigan E.C.¹

Crop Disease (Spray Schedule)	Use rate per acre (fl oz)	Use rate per 100 gal of water dilute ² (fl oz)	Maximum spray interval (days)	Use Directions and Recommendations
Pears Scab (Petal fall-cover sprays)	8-12	2-3	7-10	<p>Application timing: Rubigan E.C. may be applied alone or in tank mix combination with recommended rates of a protectant fungicide.</p> <p>Scab and Powdery Mildew: Do not apply to pears until after petal fall. Such application(s) of Rubigan E.C. will control only scab or powdery mildew resulting from infection periods occurring after petal fall.</p> <p>Restrictions: Do not apply more than 12 fl oz of Rubigan E.C. per acre per application or more than 84 fl oz per acre per season.</p> <p>Preharvest Interval: Do not apply within 30 days of harvest.</p>
Powdery Mildew (Petal fall – cover sprays)	8-12	2-3	14	

¹When using "tree row volume" calculations, do not apply less than 6 fl oz of Rubigan E.C. per acre. When Rubigan E.C. is used for "Post-Infection" control of scab do not apply less than 8 fl oz per acre.

²Dilute sprays are sprayed until the point of runoff. Gallonage of dilute sprays will vary depending on tree size, density of canopy and stage of growth of the trees and tree spacing in the orchard.

Cherries: Disease Control recommendations for Western United States (West of the Rocky Mountain Continental Divide)

Rubigan E.C.¹

Crop Disease Spray Schedule	Use rate per acre (fl oz)	Use rate per 100 gal. of water dilute ² (fl oz)	Maximum spray interval (days)	Use Directions and Restrictions
Cherries Leaf spot (late bloom-harvest)	6-12	2-3	14-21	<p>Application timing: Rubigan E.C. may be applied alone or in tank mix combination with recommended rates of a protectant fungicide. Begin applications at "late bloom" to "petal fall" and continue until "harvest".</p> <p>Restrictions: Do not apply more than 12 fl oz of Rubigan E.C. per acre per application or more than 48 fl oz per acre prior to "harvest". Rubigan E.C. may be applied up to "harvest".</p>
Powdery Mildew (late bloom-harvest)				

¹Dilute sprays are sprayed until point of runoff. Gallonage of dilute sprays will vary depending on tree size, density of canopy and stage of growth of the trees and tree spacing in the orchard.

Grapes: Disease Control Recommendations Western United States (West of the Rocky Mountain Continental Divide)

Rubigan E.C.¹

Crop Disease (Spray Schedule)	Use rate per acre (fl oz)	Maximum spray interval (days)	Use Directions and Restrictions
Grapes Powdery Mildew (Pre-bloom)			<p>Application timing: Rubigan E.C. may be applied alone or in tank mix combination with recommended rates of a protectant fungicide. Depending on the length of time from "full bloom" to "veraison", amount of foliar canopy and/or the Rubigan E.C. spray interval, choose one of the three spray schedules.</p> <p>Use sulfur on an appropriate schedule to maintain "mildew free" foliage prior to the initial Rubigan E.C. application.</p> <p>Precautions: Use of Rubigan E.C. at higher than recommended rates during the "pre-bloom" stage of growth may result in slight foliar effects consisting of leaf curling and/or darker green leaf color, however, these effects do not affect the fruit yield or quality.</p> <p>Restrictions: Do not apply more than 6 fl oz of Rubigan E.C. per acre per application or more than 19 fl oz per acre per season.</p> <p>Preharvest Interval: Do not apply within 30 days of harvest.</p>
2 weeks Pre-bloom	2-3	14-18	
Full Bloom	4	14-18	
1 st Post-bloom	6	14-18	
2 nd Post-bloom	6	14-18	
(Pre-bloom/Extended)			
2 weeks Pre-bloom	2	14-18	
Full-bloom	3	14-18	
1 st Post-bloom	4	14-18	
2 nd Post-bloom	5	14-18	
3 rd Post-bloom	5	14-18	
(Full bloom)			
Full-bloom	3	14-18	
1 st Post-bloom	4	14-18	
2 nd Post-bloom	6	14-18	
3 rd Post-bloom	6	14-18	

GENERAL USE PRECAUTIONS

Apply Rubigan E.C. with ground equipment only.

Chemigation: Do not apply this product through any type of irrigation system.

Application Directions

Rubigan E.C. should be added to the spray tank during the last half of the filling operation. Continuous agitation during completion of filling and spraying will be necessary to insure a uniform spray mixture. Apply Rubigan E.C. with sufficient pressure and spray volume to insure thorough wetting of all plant surfaces. Special care should be taken to thoroughly wet new terminal growth and plant areas already diseased with powdery mildew. Applications of Rubigan E.C. should begin at the earliest appearance of signs or symptoms of powdery mildew.

ROSES

Apply Rubigan E.C. at the recommended application rate and spray interval.

Tank Mixtures

In areas where black spot occurs, Rubigan E.C. should be tank mixed with an EPA registered, commercially available fungicide. Use the recommended label rate of the selected tank mix product for black spot control and the appropriate rate for Rubigan E.C. from the tables below.

Greenhouse Roses

Disease Severity*	Rubigan E.C. Application Rate (fl oz/100 gal)	Spray Interval (days)
Low	3-5	10-14
Medium	4-6	10-12
High	6-8	7-10

Field Grown Roses

Disease Severity*	Rubigan E. C. Application Rate (fl oz/100 gal)	Spray Interval (days)
Low	4-5	10-14
Medium	6-8	10-14
High	8-12	7-10

*Low (1-30), Medium (30-60), High (60-100) percent of leaves on individual plants infected with disease organism.

Note: When applied at recommended rates, Rubigan E.C. may cause leaf puckering and other growth effects on the foliage of rose cultivars growing under cool, foggy, or overcast conditions. Plants growing under such conditions develop more slowly and are more sensitive to these growth effects. The rose cultivars "Royalty" and "Visa" have exhibited growth effects under these conditions while the same cultivars growing under sunny conditions have exhibited no such effects.

Field or Container Grown Ornamentals

Apply Rubigan E.C. at the recommended application rate and spray interval.

Ajuga, Begonia, Calendula, Chrysanthemum, Dahlia, Delphinium, Hydrangea, Phlox, Sweet Pea, Verbena, Zinnia

Rubigan E. C. Application Rate * (fl oz/100 gal)	Spray Interval (days)
3-5	10-14

Crep Myrtle, Euonymus, Photinia

Rubigan E. C. Application Rate * (fl oz/100 gal)	Spray Interval (days)
6-10	10-14

*Apply Rubigan E. C. at the recommended low rate and maximum spray interval only when using as a preventative or when leaf infection is less than 10 percent. Use the higher rates and shorter spray intervals when greater than 10 percent leaf infection occurs and environmental conditions encourage disease spread.

