

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

JUN 22 2011

Ruhi Rezaaiyan  
Syngenta Crop Protection, Inc.  
P.O. Box 18300  
Greensboro, NC 27419-8300

SUBJECT: Label Amendment; Quadris Top  
EPA Reg. No. 100-1313; Decision: 426122  
Your Submission Dated 12/18/2009 and revised label resubmissions

Dear Ms. Rezaaiyan:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as amended, to add new uses for carrot, chickpea, soybean, stone fruit, and strawberry, is acceptable provided that you:

Make the following changes to the label.

- a. On page 1 delete the following statement "A broad-spectrum fungicide for prevention and control of certain diseases in golf course turfgrass only."
- b. The listed 7-10 day minimum retreatment interval for chickpeas is not supported by the residue data. Labels for chickpea uses must be revised to specify a minimum retreatment interval of 14 days.
- c. Turnip greens can be added to the list of brassica leafy vegetables.
- d. The proposed 0.46 lb ai/A maximum seasonal application rate for soybeans is not supported by the residue data. Labels for soybean use must be revised to specify a maximum seasonal application rate of 0.22 lb ai/A. Therefore on page 36, change #1 in the "Specific Use Restrictions" to "Do not apply more than 26.5 fl.oz of Quadris Top per acre per season (0.22 lb. ai/A per season)". Change #2 below it from "0.46 lb" to "0.22 lb".
- e. On page 10 delete "Okra" from the list of crops permitting a 0-day PBI.
- f. On page 38 in the "Strawberry" section, you must delete the reference to "and other

low growing berries and the additional crops: bearberry, bilberry, cloudberry, muntries and partridgeberry.

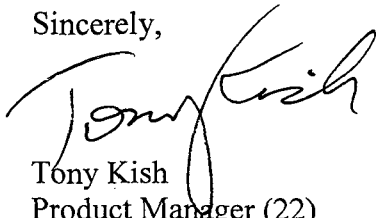
As a condition of approval the following data must be submitted by 6/15/2013:

1. Additional storage stability data (860.1380) for the triazole metabolites in livestock commodities are required. Supporting storage stability data for residues of 1,2,4-triazole (1,2,4-T) are required to support the storage conditions (frozen) and intervals (up to 10 months) of livestock commodity samples collected for the cattle and poultry feeding studies that were evaluated.
2. Additional soybean field trials (860.1500) conducted with the SC formulation at the maximum proposed use rate are required. These data may be field trials conducted with a 25% reduction in number or in the form of limited side-by-side trials (conducted at exaggerated rates) to compare residues resulting from the use of an EC formulation with that of the SC formulation.
3. Additional EC and EW bridging data are required. As per the ChemSAC meeting on 1/27/2010, additional side-by-side field trials on grapes are required comparing difenoconazole residues resulting from applications of the EC and EW formulations. This should provide a more complete and robust dataset to serve as a surrogate for potential residual differences in/on the other new fruit and vegetables at issue. HED recommends three side-by-side trials on grapes comparing the EC and EW formulations using ground equipment conducted at the maximum use rate on grapes (5 applications at 0.12 lb ai/A/application, with a 6-day RTI), or at a slightly exaggerated rate (up to 1.25x or 0.15 lb ai/A/application), and collecting 2-4 samples at several intervals between 0-day and 21-days after the last application.
4. Estuarine/marine invertebrate life cycle study (850.1350) - prior study did not establish a definitive NOAEC.
5. Avian acute oral study (850.2100) for the difenoconazole degradates CGA-71019 and CGA-142856.
6. Conditional data requested in the HED risk assessment for these new uses which has been submitted, or which will be submitted under previous risk assessments/due dates must be found acceptable (ie. storage stability on crop matrices and processed commodities, confined rotational crop data reflecting phenyl-ring labeling, immunotoxicity, etc.).

Submit one copy of your final printed labeling before you release the product for shipment. If you have any questions regarding this correspondence, contact Rose Kearns of my

staff by phone at 703-305-5611 or via email at [kearns.rosemary@epa.gov](mailto:kearns.rosemary@epa.gov) or myself at 703-308-9443 or via email at [kish.tony@epa.gov](mailto:kish.tony@epa.gov).

Sincerely,



Tony Kish  
Product Manager (22)  
Fungicide Branch  
Registration Division (7505P)

Enclosure

4/86

**GROUP 11 3 FUNGICIDES**

**Quadris Top™**

**Fungicide**

[A broad-spectrum fungicide for prevention and control of certain diseases in golf course turfgrass only.]

Active Ingredients:

Azoxystrobin*	18.2%
Difenoconazole**	11.4%
<hr/>	
Other Ingredients:	70.4%
Total:	100.0%

\*CAS No. 131860-33-8

\*\*CAS No. 119446-68-3

Contains 1.67 lb. of azoxystrobin active ingredient and 1.05 lb. of difenoconazole active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1313

EPA Est.

SCP 1313A

- \_\_\_\_\_ quarts
- 1 gallon
- 2.5 gallons
- 10 gallons
- 30 gallons
- \_\_\_\_\_ gallons
- Net Contents

**ACCEPTED**  
**with COMMENTS**  
**In EPA Letter Dated**  
 JUN 22 2011  
**Under the Federal Insecticide,**  
**Fungicide, and Rodenticide Act**  
**as amended, for the pesticide**  
**registered under EPA Reg. No.**  
 100-1313

<b>FIRST AID</b>	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	
<p><b>HOT LINE NUMBER</b>                      For 24-Hour Medical Emergency Assistance (Human or Animal)                      Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident)                      Call  <b>1-800-888-8372</b></p>	

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**PRECAUTIONARY STATEMENTS**

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**Hazards to Humans and Domestic Animals**

**CAUTION**

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

**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 F or G on an EPA chemical resistance category selection chart.

### Applicators and other handlers must wear:

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

### User Safety Requirements

Follow 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.

### Engineering Control Statements

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### 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. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### Environmental Hazards

Difenoconazole is toxic to fish, mammals and aquatic invertebrates. Drift and runoff may be hazardous to **estuarine/marine** organisms in water adjacent to treated area.

Azoxystrobin is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Azoxystrobin can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to ground water under certain conditions as a result of agricultural use. This chemical may leach into ground water if used in areas where permeable, particularly where the water table is shallow.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product may contaminate water through drift or spray in wind. This product has a potential for runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach surface water.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or regional office of the EPA.

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

Notify State and/or Federal authorities and Syngenta immediately if you observe any adverse environmental effects due to use of this product.

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**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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**NOTICE:** Read the entire Directions for Use and Conditions of Sale and 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.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and, (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) 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 SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.



## DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for 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 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 materials such as polyvinyl chloride, nitrile rubber or butyl rubber.
- Shoes plus socks

### 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.

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**[PRODUCT INFORMATION - FOOD CROP USES]**

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Quadris Top is a broad-spectrum product containing two fungicides. It has preventative, systemic and curative properties and is recommended for the control of many important plant diseases. Quadris Top provides excellent disease control of many leaf spots and powdery mildews. Quadris Top is applied as a foliar spray and can be used in block, alternating spray or tank-mix programs with other crop protection products. All applications should be made according to the use directions that follow.

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**[PRODUCT INFORMATION - GOLF COURSE TURF]**

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Quadris Top is a broad-spectrum product containing two fungicides. It has preventative, systemic and curative properties and is recommended for the control of many important turf diseases. Quadris Top provides excellent disease control of many leaf spots and powdery mildews. Quadris Top is applied as a foliar spray and can be used in block, alternating spray or tank-mix programs with other turf protection products. All applications should be made according to the use directions that follow.

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**[FOOD CROP - USE PRECAUTIONS AND RESTRICTIONS]**

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**FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES.**

**ATTENTION**

Quadris Top is extremely phytotoxic to certain apple varieties.

**AVOID SPRAY DRIFT.** Extreme care must be used to prevent injury to apple trees (and apple fruit).

**DO NOT** spray Quadris Top where spray drift may reach apple trees.

**DO NOT** spray when conditions favor drift beyond area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State extension agent for spray drift prevention guidelines in your area.

**DO NOT** use spray equipment which has been previously used to apply Quadris Top to spray apple trees. Even trace amounts can cause unacceptable phytotoxicity to certain apple and crabapple varieties.

**AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.**

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**[GOLF COURSE TURF - USE PRECAUTIONS AND RESTRICTIONS]**

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**FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN TURF INJURY AND/OR POOR DISEASE CONTROL.**

**ATTENTION**

**DO NOT** apply by air.

**DO NOT** apply through irrigation systems (chemigation)

**DO NOT** spray Quadris Top where spray drift may reach apple trees. Quadris Top is extremely phytotoxic to certain apple varieties.

**DO NOT** spray when conditions favor drift beyond area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State extension agent for spray drift prevention guidelines in your area.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

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**[FOOD CROP - USE INFORMATION]**

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**Application:** Thorough coverage is necessary to provide good disease control. Make no more spray solution than is needed for application. Avoid spray overlap, as crop injury may occur.

**Adjuvants:** When an adjuvant is to be used with this product, Syngenta recommends the use of a Chemical Producers and Distributors Association certified adjuvant unless otherwise restricted for a specific crop.

**Efficacy:** Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications if the maximum amount of Quadris Top has been used. If resistant isolates to Group 3 or Group 11 fungicides are present, efficacy can be reduced for certain diseases. The higher rates in the rate range and/or shorter spray intervals may be required under conditions of heavy infection pressure, with highly susceptible varieties, or when environmental conditions are conducive to disease.

**Integrated Pest Management (IPM):** Quadris Top should be integrated into an overall disease and pest management strategy whenever the use of a fungicide is required. Cultural practices known to reduce disease development should be followed. Consult your local agricultural authorities for additional IPM strategies established for your area. Quadris Top may be used in State Agricultural Extension advisory (disease forecasting)

programs which recommend application timing based on environmental factors favorable for disease development.

### Resistance Management

GROUP	11	3	FUNGICIDES
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Quadris Top contains two fungicides - azoxystrobin, a strobilurin fungicide in Group 11 and difenoconazole, a triazole fungicide in Group 3. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use of this product should conform to resistance management strategies established for the crop and use area. Consult your local or state agricultural authorities for resistance management strategies that are complementary to those in this label. Resistance management strategies may include rotating and/or tank mixing with products having different modes of action or limiting the total number of applications per season. Syngenta encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label. Quadris Top should not be alternated or tank mixed with any fungicide to which resistance has already developed.

As part of a resistance management strategy:

- Apply a maximum of 4 sprays during one crop cycle.
- Apply no more than 2 sequential applications unless otherwise stated in the crop section.
- When tank mixing or alternating, use an effective partner – one that provides satisfactory disease control when used alone at the mixture rate.

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**Rotational Crops:** Please see the following table for the crop rotational restrictions:

Rotational Crops	Planting Time From Last Quadris Top Application
Brassica (Cole) leafy vegetables Bulb vegetables Canola Carrots Cereals (wheat, barley, triticale) Chickpea Cotton Cucurbit vegetables Eggplant Okra Pepper Potatoes Soybeans Strawberries Sweet corn Tomatoes Tuberos & Corn vegetable subgroup	0 days
Sugar beets	36 days
Buckwheat Millet Oats Rye	12 months
All Other Crops Intended for Food and Feed	8 months

**Crop Tolerance:** Plant tolerance has been found to be acceptable for all crops on the label, however, not all possible tank-mix combinations have been tested under all conditions. When possible, it is recommended to test the combinations on a small portion of the crop to ensure that a phytotoxic response will not occur as a result of application. See precautions regarding apple phytotoxicity.

**Greenhouse Use:** For resistance management, do not use Quadris Top for transplant production.

**Spray Drift Management:** To avoid spray drift, do not apply when conditions favor drift beyond the target area. The interaction of many equipment and weather related factors determine the potential for spray drift. **AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER.**

**[GOLF COURSE TURF - USE INFORMATION]**

**Application:** Thorough coverage is necessary to provide good disease control. Make no more spray solution than is needed for application. Avoid spray overlap, as turf injury may occur.

**Adjuvants:** When an adjuvant is to be used with this product, Syngenta recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

**Efficacy:** Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications if the maximum amount of Quadris Top has been used. If resistant isolates to Group 3 or Group 11 fungicides are present, efficacy can be reduced for certain diseases. The higher rates in the rate range and/or shorter spray intervals may be required under conditions of heavy infection pressure with highly susceptible varieties, or when environmental conditions are conducive to disease.

**Integrated Pest Management (IPM):** Quadris Top should be integrated into an overall disease and pest management strategy whenever the use of a fungicide is required. Cultural practices known to reduce disease development should be followed. Consult your local agricultural authorities for additional IPM strategies established for your area. Quadris Top may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

**Resistance Management**

**GROUP 11 | 3 FUNGICIDES**

Quadris Top contains two fungicides - azoxystrobin, a strobilurin fungicide in Group 11 and difenoconazole, a triazole fungicide in Group 3. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use of this product should conform to resistance management strategies established for the crop and use area. Consult your local or State agricultural authorities for resistance management strategies that are complementary to those in this label. Resistance management strategies may include rotating and/or tank mixing with products having different modes of action or limiting the total number of applications per season. Syngenta encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label. Quadris Top should not be alternated or tank mixed with any fungicide to which resistance has already developed.

**Turfgrass Tolerance:** Plant tolerance has been found to be acceptable for all turfgrass species on the label, however, not all possible tank-mix combinations have been tested under all conditions. When possible, it is recommended to test the combinations on a

small portion of the turf to ensure that a phytotoxic response will not occur as a result of application.

**Spray Drift Management:** To avoid spray drift, do not apply when conditions favor drift beyond the target area. The interaction of many equipment and weather related factors determine the potential for spray drift. **AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER.**

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## **[FOOD CROP - MIXING AND APPLICATION METHODS]**

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### **Spray Equipment**

#### **Nozzles**

- Equip sprayers with nozzles that provide accurate and uniform application.
- Nozzles should be the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- It is suggested that screens be used to protect the pump and to prevent nozzles from clogging.
- Screens placed on suction side of pump should be *16-mesh or coarser*.
- Do not place a screen in the recirculation line.
- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.
- Check nozzle manufacturer's recommendations.

#### **Pump**

- Use a pump with capacity to:
  - (1) Maintain 35-40 psi at nozzles.
  - (2) Provide sufficient agitation in tank to keep mixture in suspension - this requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state recommendations. For specific local directions and spray schedules, consult the current state agricultural recommendations.

#### **Mixing Instructions**

- Quadris Top is a suspension concentrate (SC) formulation.
- Prepare no more spray mixture than is required for the immediate operation.
- Thoroughly clean spray equipment before using this product.

- Agitate the spray solution before and during application.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

### **Quadris Top Alone (No Tank Mix)**

- Add  $\frac{1}{2}$ - $\frac{2}{3}$  of the required amount of water to the spray or mixing tank.
- With the agitator running, add Quadris Top to the tank.
- Continue agitation while adding the remainder of the water.
- Begin application of the spray solution after Quadris Top has completely dispersed into the mix water.
- Maintain agitation until all of the mixture has been sprayed.

**Quadris Top + Tank Mixtures:** Quadris Top is usually compatible with all tank-mix partners listed on this label. To determine the physical compatibility of Quadris Top with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

**Tank Mixtures:** All directions for use, crops/sites, use rates, dilution rates, precautions, and limitations which appear on the tank-mix product label must be observed. The label dosage for the tank-mix partner is not to be exceeded, and the most restrictive label precautions and limitations are to be followed.

### **Mixing in the Spray Tank**

- Add  $\frac{1}{2}$ - $\frac{2}{3}$  of the required amount of water to the spray or mixing tank.
- With the agitator running, add the tank-mix partner(s) into the tank in the same order as described above.
- Allow the material to completely dissolve and disperse into the mix water. Continue agitation while adding the remainder of the water and Quadris Top to the spray tank.
- Allow Quadris Top to completely disperse.
- Spray the mixture with the agitator running.

### **Application Instructions**

Quadris Top may be applied with all types of spray equipment commonly used for making ground and aerial applications. Proper adjustments and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control.



## Ground Application

- Apply in a minimum of 10 gals. of water per acre, unless specified otherwise.
- Do not apply through any ultra-low volume (ULV) spray system.
- Thorough coverage is necessary to provide good disease control.

## Aerial Application

- Use only on crops where aerial applications are indicated.
- Thorough coverage is necessary to provide good disease control.
- Apply in a minimum of 5 gallons of water per acre unless specified otherwise.
- Avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur.
- Do not apply directly to humans or animals.
- Do not apply through any ultra-low volume (ULV) spray system.

## ATTENTION

Quadris Top is extremely phytotoxic to certain apple varieties.

**AVOID SPRAY DRIFT.** Extreme care must be used to prevent injury to apple trees (and apple fruit).

**DO NOT** spray Quadris Top where spray drift may reach apple trees.

**DO NOT** spray when conditions favor drift beyond area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State extension agent for spray drift prevention guidelines in your area.

**DO NOT** use spray equipment which has been previously used to apply Quadris Top to spray apple trees. Even trace amounts can cause unacceptable phytotoxicity to certain apple and crabapple varieties.

**AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.**

## Application Through Irrigation Systems (Chemigation)

- Use only on crops for which chemigation is specified on this label.
- Apply this product only through center pivot, solid set, hand move, or moving wheel irrigation systems. 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.
- Apply in 0.1-0.25 inches/acre. Excessive water may reduce efficacy.

- 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.

### Operating Instructions

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
6. 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.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

### Center Pivot Irrigation Equipment

**Notes:** (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when chemigating Quadris Top through center pivot systems because of non-uniform application.

- Determine the size of the area to be treated.

- Determine the time required to apply 1/8-1/2 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as recommended by the equipment manufacturer. When applying Quadris Top through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of Quadris Top required to treat the area covered by the irrigation system.
- Add the required amount of Quadris Top and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the Quadris Top solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
- Maintain constant solution tank agitation during the injection period.
- Continue to operate the system until the Quadris Top solution has cleared the sprinkler head.

### **Solid Set, Hand Move, and Moving Wheel Irrigation Equipment**

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20- to 30-minute interval. When applying Quadris Top through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of Quadris Top required to treat the area covered by the irrigation system.
- Add the required amount of Quadris Top into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the Quadris Top solution has cleared the last sprinkler head.

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### **SPECIFIC INSTRUCTIONS FOR PUBLIC WATER SYSTEMS**

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1. 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.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow 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 a 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.

3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. 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.
5. 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.
6. 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.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

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**[GOLF COURSE TURF - MIXING AND APPLICATION METHODS]**

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**Spray Equipment**

**Nozzles**

- Equip sprayers with nozzles that provide accurate and uniform application.
- Nozzles should be the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- It is suggested that screens be used to protect the pump and to prevent nozzles from clogging.
- Screens placed on suction side of pump should be *16-mesh or coarser*.
- Do not place a screen in the recirculation line.
- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.
- Check nozzle manufacturer's recommendations.

## Pump

- Use a pump with capacity to:
  - (1) Maintain 35-40 psi at nozzles.
  - (2) Provide sufficient agitation in tank to keep mixture in suspension - this requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state recommendations. For specific local directions and spray schedules, consult the current state agricultural recommendations.

## Mixing Instructions

- Quadris Top is a suspension concentrate (SC) formulation.
- Prepare no more spray mixture than is required for the immediate operation.
- Thoroughly clean spray equipment before using this product.
- Agitate the spray solution before and during application.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

## Quadris Top Alone (No Tank Mix)

- Add  $\frac{1}{2}$ - $\frac{2}{3}$  of the required amount of water to the spray or mixing tank.
- With the agitator running, add Quadris Top to the tank.
- Continue agitation while adding the remainder of the water.
- Begin application of the spray solution after Quadris Top has completely dispersed into the mix water.
- Maintain agitation until all of the mixture has been sprayed.

**Quadris Top + Tank Mixtures:** Quadris Top is usually compatible with many tank-mix partners registered for use on turf. To determine the physical compatibility of Quadris Top with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

## Mixing in the Spray Tank

- Add  $\frac{1}{2}$ - $\frac{2}{3}$  of the required amount of water to the spray or mixing tank.
- With the agitator running, add the tank-mix partner(s) into the tank in the same order as described above.

- Allow the material to completely dissolve and disperse into the mix water. Continue agitation while adding the remainder of the water and Quadris Top to the spray tank.
- Allow Quadris Top to completely disperse.
- Spray the mixture with the agitator running.

### **Application Instructions**

**DO NOT** apply by air.

**DO NOT** apply through irrigation systems (chemigation).

Quadris Top may be applied with all types of spray equipment commonly used for making ground applications. Proper adjustments and calibration of spraying equipment to give good coverage is essential for good disease control.

### **Ground Application**

- Apply in sufficient water to provide good coverage. Typical application volumes range from 30 to 450 gallons of spray per acre.
- Thorough coverage is necessary to provide good disease control.

**[FOOD CROPS] SPECIFIC DIRECTIONS FOR USE**

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
Almonds	Alternaria leafspot ( <i>A. alternata</i> )  Anthracnose ( <i>Colletotrichum acutatum</i> )  Blossom Blight ( <i>Monilinia</i> spp.)  Leaf Blight ( <i>Seimatosporium lichenicola</i> )  Leaf rust ( <i>Tranzschelia discolor</i> )  Scab ( <i>Venturia carpophilia</i> )  Shot hole ( <i>Wilsonomyces carpophilus</i> )	8 - 14	For blossom blight, begin applications at early bloom and continue through petal fall. Make no more than 2 sequential applications before alternating to another fungicide with a different mode of action.  For all other diseases, begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 14- to 21-day schedule making no more than 2 sequential before alternating to another fungicide with a non-QoI (Group 11) mode of action.  If monitoring or history indicates the presence of Alternaria, apply 14 oz./A of Quadris Top in the late spring (mid April to beginning of May) and then repeat the treatment 2-3 weeks later.  <i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.  <i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.  <i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. A minimum of 15 gal./A for ground applications is recommended. For aerial applications, a minimum of 10 gal./A of water is recommended.

**Specific Use Restrictions:**

- Do not use with an adjuvant.
- Do not apply more than 56 fl. oz./A of Quadris Top per crop.
- Do not apply more than 0.46 lb. ai/A per crop of difenoconazole-containing products.
- Do not apply more than 1.5 lb. ai/A per crop of azoxystrobin-containing products.
- Do not apply within 28 days of harvest (28-day PHI).

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<p><b>Brassica (Cole) Leafy Vegetables</b></p> <p>Broccoli Brussels Sprouts Cabbage Cauliflower Collards Kale Mustard Greens</p> <p>Including all cultivars and/or hybrids of these</p> <p>See additional crops below.</p>	<p>Alternaria Diseases (<i>Alternaria</i> spp.)</p> <p>Anthracnose (<i>Colletotrichum higginsianum</i>)</p> <p>Cercospora Leaf Spot (<i>C. brassicicola</i>)</p> <p>Powdery mildew (<i>Erysiphe polygoni</i>)</p>	<p>8 - 14</p>	<p>Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 7- to 14-day schedule, making no more than 1 application before alternating to another fungicide with a non-QoI (Group 11) mode of action.</p> <p><i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.</p> <p><i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.</p> <p><i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.</p>
<p><b>Complete list of Brassica Leafy Vegetables:</b> Broccoli; broccoli, Chinese (gai lon); broccoli raab (rapini); Brussels sprouts; cabbage; cabbage, Chinese (bok choy); cabbage, Chinese (napa); cabbage, Chinese mustard(gai choy); cauliflower; cavalo broccolo; collards; kale; kohlrabi; mizuna; mustard greens; mustard spinach; rape greens</p>			
<p><b>Application:</b> For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground, chemigation, or aerial application. A minimum of 15 gal./A for ground applications is recommended. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.</p>			
<p><b>Specific Use Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not apply more than 56 fl. oz./A of Quadris Top per season.</li> <li>• Do not apply more than 0.46 lb. ai/A per season of difenoconazole-containing products.</li> <li>• Do not apply more than 0.75 lb. ai/A per season of azoxystrobin-containing products.</li> <li>• Do not apply within 1 day of harvest (1-day PHI).</li> </ul>			



Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<b>Bulb Vegetables</b>  Onion, Bulb Garlic Shallot  Onion, Green Leek Welsh Onion	Botrytis leaf blight ( <i>B. squamosa</i> )  Cercospora Leaf Spot ( <i>C. duddiae</i> )  Leaf Blotch ( <i>Cladosporium allii- cepae</i> )  Powdery Mildew ( <i>Leveillula taurica</i> )  Purple blotch ( <i>Alternaria porri</i> )  Stemphyllium leaf blight ( <i>S. vesicarium</i> )	8 - 14	Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 7- to 14-day schedule, making no more than 1 application before alternating to another fungicide with a non-Qol (Group 11) mode of action.  <i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.  <i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.  <i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.

**Complete list of Bulb Vegetables:** Chive, fresh leaves; chive, Chinese, fresh leaves; daylily, bulb; elegans hosta; fritillaria, bulb; fritillaria, leaves; garlic, bulb; garlic, great-headed, bulb; garlic, serpent, bulb; kurrat; lady's leek; leek; leek, wild; lily, bulb; onion, Beltsville bunching; onion, bulb; onion, Chinese, bulb; onion, fresh; onion, green; onion, macrostem; onion, pearl; onion, potato, bulb; onion, tree, tops; onion, Welsh, tops; shallot, bulb; shallot, fresh leaves; cultivars, varieties, and/or hybrids of these.

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground, chemigation, or aerial application. A minimum of 15 gal./A for ground applications is recommended. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions:**

- For green onions, do not apply more than 42 fl. oz./A of Quadris Top per season.
- For green onions, do not apply more than 0.34 lb. ai /A per season of difenoconazole-containing products.
- For dry bulb onions, do not apply more than 56 fl. oz./A per season of Quadris Top per crop.
- For dry bulb onions, do not apply more than 0.46 lb. ai/A per season of difenoconazole-containing products.
- For the bulb crop group, do not apply more than 1.5 lb. ai/A per season of azoxystrobin-containing products.
- Do not apply within 7 days of harvest (7-day PHI).

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
Carrots	<p>Cercospora leaf spot (<i>Cercospora carotae</i>)</p> <p>Alternaria leaf blight (<i>Alternaria dauci</i>)</p> <p>Powdery mildew (<i>Erysiphe</i> spp.)</p> <p>Southern blight (<i>Sclerotium rolfsii</i>)</p>	8-14	<p>Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 7-10 day schedule making no more than 2 sequential applications before alternating to another fungicide with a different mode of action.</p> <p><i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.</p> <p><i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.</p> <p><i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.</p> <p>For Southern blight (white mold) use 14 oz./A.</p>

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground, chemigation, or aerial application. A minimum of 15 gals./A for ground applications is recommended. For aerial applications a minimum of 10 gals./A of water is recommended. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions:**

- 1) Do not apply more than 56 fl. oz. of Quadris Top per acre per season.
- 2) Do not apply more than 0.46 lb. ai/A/season of a difenoconazole containing product.
- 3) Do not apply more than 2.0 lb. ai/A/season of a azoxystrobin containing product.
- 4) Do not apply within 7 days of harvest.

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<b>Chickpea</b> (garbanzo bean)	Alternaria blight ( <i>A. alternata</i> )  Ascochyta blight ( <i>A. rabiei</i> )  Powdery mildew ( <i>Leveillula taurica</i> )  Rust ( <i>Uromyces ciceris-arietini</i> )	8-14	Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 7-10 day schedule making no more than 2 sequential applications before alternating to another fungicide with a different mode of action.  <i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i>  <i>Optional language if label has a single rate and interval range: If disease pressure is high, use the shortest interval.</i>  <i>Optional language if label has a rate range and interval range: If disease pressure is high, use the shortest interval and highest rate.</i>

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground, chemigation, or aerial application. A minimum of 15 gals./A for ground applications is recommended. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions:**

- 1) Do not apply more than 56 fl. oz. of Quadris Top per acre per season.
- 2) Do not apply more than 0.46 lb. ai/A/season of a difenoconazole containing product.
- 3) Do not apply more than 1.5 lb. ai/A/season of an azoxystrobin containing product.
- 4) Do not apply within 14 days of harvest.

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<p><b>Citrus</b></p> <p>Grapefruit Lemon Lime Orange (Sour and Sweet) Tangerine</p> <p>Including all cultivars and/or hybrids of these</p>	<p>Greasy spot (<i>Mycosphaerella citri</i>)</p>	<p>10 - 15.4</p>	<p>Quadris Top applications should begin prior to disease development and continue throughout the season on 7- to 21-day intervals following the resistance management guidelines. Applications may be made by ground or air. An adjuvant may be added at recommended rates. A horticultural spray oil should be used to improve control of greasy spot.</p> <p><i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i></p> <p><i>Optional language if label has a single rate and interval range: If disease pressure is high, use the shortest interval.</i></p> <p><i>Optional language if label has a rate range and interval range: If disease pressure is high, use the shortest interval and highest rate.</i></p> <p>Make no more than 2 sequential applications before alternating to another fungicide with a non-QoI (Group 11) different mode of action. Do not make more than 4 applications of Quadris Top or other Group 11 fungicides per season.</p>
	<p>Alternaria Leaf and Fruit Spot (<i>Alternaria citri</i>)</p> <p>Anthracnose (<i>Colletotrichum spp.</i>)</p> <p>Black Spot (<i>Guignardia citricarpa</i>)</p> <p>Greasy Spot Rind blotch (<i>Mycosphaerella citri</i>)</p> <p>Melanose (<i>Diaporthe citri</i>)</p>	<p>10 - 15.4</p>	<p>Quadris Top applications should begin prior to disease development and continue throughout the season on 7- to 21-day intervals following the resistance management guidelines. Applications may be made by ground or air. An adjuvant may be added at recommended rates. A horticultural spray oil should be used to improve control of greasy spot.</p> <p><i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i></p> <p><i>Optional language if label has a single rate and interval range: If disease pressure is high, use the shortest interval.</i></p> <p><i>Optional language if label has a rate range and interval range: If disease pressure is high, use the shortest interval and highest rate.</i></p>

<p>Post-Bloom Fruit Drop (PFD) (<i>Colletotrichum acutatum</i>)</p> <p>Phomopsis Stem-End Rot (<i>Phomopsis citrii</i>)</p> <p>Scab (<i>Elsinoe fawcettii</i>)</p>		<p>Make no more than 2 sequential applications before alternating to another fungicide with a non-QoI (Group 11) different mode of action. Do not make more than 4 applications of Quadris Top or other Group 11 fungicides per season.</p>
<p><b>Complete list of Citrus Fruits:</b> Calamondin; citrus citron; citrus hybrids (includes chironja, tangelo, tangor); grapefruit; kumquat; lemon; lime; mandarin (tangerine); orange, sour; orange, sweet; pummelo; Satsuma mandarin</p>		
<p><b>Application:</b> For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. A minimum of 15 gal./A for ground applications is recommended. For aerial applications a minimum of 10 gal./A of water is recommended.</p>		
<p><b>Specific Use Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not use Quadris Top in citrus plant propagation nurseries.</li> <li>• Do not apply more than 61.5 fl. oz./A of Quadris Top per season.</li> <li>• Do not apply more than 0.5 lb. ai/A per crop of difenoconazole-containing products.</li> <li>• Do not apply more than 1.5 lb. ai/A per crop of azoxystrobin-containing products.</li> <li>• May be applied the day of harvest (0-day PHI).</li> </ul>		

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<p><b>Cucurbit Vegetables</b></p> <p>Cantaloupe Cucumber Honeydew Muskmelon Watermelon Pumpkin Squash Zucchini</p> <p>Including cultivars and/or hybrids of these</p> <p>See additional cucurbit crops below.</p>	<p>Alternaria Leaf Blight (<i>A. cucumerina</i>)</p> <p>Alternaria Leaf Spot (<i>A. alternata</i>)</p> <p>Anthracnose (<i>Colletotrichum orbiculare</i>)</p> <p>Belly Rot (<i>Rhizoctonia solani</i>)</p> <p>Cercospora Leaf Spot (<i>C. citrullina</i>)</p> <p>Downy Mildew (<i>Pseudoperonospora cubensis</i>)</p> <p>Gummy Stem Blight (<i>Didymella bryoniae</i>)</p> <p>Myrothecium Canker (<i>M. roridum</i>)</p> <p>Phoma Blight (<i>P. exigua</i>)</p> <p>Phyllosticta Leaf Spot (<i>P. cucurbitacearum</i>)</p> <p>Plectosporium Blight (<i>P. tabacinum</i>)</p> <p>Powdery Mildew (<i>Sphaerotheca fuliginea, Erysiphe cichoracearum</i>)</p> <p>Septoria Leaf Blight (<i>S. cucurbitacearum</i>)</p>	<p>10 - 14</p>	<p>Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 7- to 14-day schedule making no more than 1 application of a QoI containing fungicide before alternating to another fungicide with a different mode of action.</p> <p><i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.</p> <p><i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.</p> <p><i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.</p> <p>For belly rot control, the first application should be made at the 1- to 3-leaf crop stage with a second application just prior to vine tip or 10-14 days later, whichever occurs first.</p>

**Complete list of Cucurbit Vegetables:** Chayote (fruit); Chinese waxgourd (Chinese preserving melon); citron melon; cucumber; gherkin; gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra); *Momordica* spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); muskmelon (includes cantaloupe); pumpkin; squash, summer; squash, winter (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); watermelon

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground, chemigation, or aerial application. A minimum of 15 gal./A for ground applications is recommended (20 for gummy stem blight). For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions:**

- Do not apply more than 56 fl. oz./A of Quadris Top per season.
- Do not apply more than 0.46 lb. ai/A per season of difenoconazole-containing products.
- Do not apply more than 1.5 lb. ai/A per season of azoxystrobin-containing products.
- Do not apply within 1 day of harvest (1-day PHI).

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<b>Filberts</b> (Hazelnuts)	Eastern Filbert Blight ( <i>Anisogramma anomala</i> )	12 - 14	<p>Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 14- to 21-day schedule making no more than 2 sequential applications before alternating to another fungicide with a non-Qol (Group 11) different mode of action.</p> <p><i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.</p> <p><i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.</p> <p><i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.</p>

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. A minimum of 15 gal./A for ground applications is recommended. For aerial applications a minimum of 10 gal./A of water is recommended.

**Specific Use Restrictions:**

- Do not use with an adjuvant.
- Do not apply more than 56 fl. oz./A of Quadris Top per crop.
- Do not apply more than 0.46 lb. ai/A per crop of difenoconazole-containing products.
- Do not apply more than 1.2 lbs. ai/A per crop of azoxystrobin-containing products.
- Do not apply within 45 days of harvest (45-day PHI).



Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<p><b>Grapes</b> (except Concord, Concord Seedless, and Thomcord. See <b>Precaution</b> under <b>Remarks.</b>)</p>	<p>Alternaria Rot (<i>A. alternata</i>)</p> <p>Angular Leaf Spot (<i>Mycosphaerella angulata</i>)</p> <p>Anthracnose (<i>Elsinoe ampelina</i>)</p> <p>Black Rot (<i>Guignardia bidwellii</i>)</p> <p>Downy Mildew (<i>Plasmopara viticola</i>)</p> <p>Leaf Blight (<i>Pseudocercospora vitis</i>)</p> <p>Phomopsis Cane And Leaf Spot (<i>P. viticola</i>)</p> <p>Powdery Mildew (<i>Uncinula necator</i>)</p> <p>Rotbrenner (<i>Pseudopezicula tracheiphila</i>)</p> <p>Septoria Leaf Spot (<i>S. ampelina</i>)</p> <p>Suppression only: Botrytis bunch rot (<i>B. cinerea</i>)</p>	<p>10 - 14</p>	<p>For powdery mildew, begin at bud break and apply on a 10- to 21-day interval, making no more than 2 sequential applications before alternating to another fungicide with a non-QoI (Group 11) mode of action.</p> <p>For Phomopsis diseases, apply at bud break, before shoots are 0.5 inches in length, and then again when shoots are 5-6 inches in length.</p> <p>For black rot, begin when shoot length is 1-3 inches and continue on a 10-day interval.</p> <p>For all other diseases, begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 10- to 14-day schedule, making no more than 2 sequential applications before alternating to another fungicide with a non-QoI (Group 11) mode of action.</p> <p><i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate. <i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval. <i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.</p> <p><b>PRECAUTION:</b> Avoid rates of methylated or ethylated vegetable oil/organosilicone adjuvants over 0.125% with Quadris Top as grape leaf injury may occur. <b>PRECAUTION:</b> On <i>V. labrusca</i>, <i>V. labrusca</i> hybrids and other non-viniferea hybrids where sensitivity is not known, the use of Quadris Top by itself or in tank mixtures with materials that may increase uptake (adjuvants, foliar fertilizers) may result in leaf burning or other phytotoxic effects.</p> <p style="text-align: center;"><b>ATTENTION</b></p> <p>Quadris Top is extremely phytotoxic to certain apple varieties. Refer to caution in Use <b>Precautions and Restrictions</b> section of label.</p>

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. A minimum of 15 gal./A for ground applications is recommended. For aerial applications a minimum of 10 gal./A of water is recommended.

**Specific Use Restrictions:**

- Do not apply more than 56 fl. oz./A of Quadris Top per season.
- Do not apply more than 0.46 lb. ai/A per crop of difenoconazole-containing products.
- Do not apply more than 1.5 lb. ai/A per crop of azoxystrobin-containing products.
- Do not apply within 14 days of harvest (14-day PHI).

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
Pecans	Downy Spot ( <i>Mycosphaerella caryigena</i> )  Liver Spot ( <i>Gnomonia caryae</i> pv <i>pecanae</i> )  Pecan Scab ( <i>Cladosporium caryigenum</i> )  Powdery Mildew ( <i>Microsphaera penicillata</i> )  Vein Spot ( <i>Gnomonia nerviseda</i> )  Zonate Leaf Spot ( <i>Grovesinia pyramidalis</i> )	8 - 14	Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 14- to 21-day schedule, making no more than 2 sequential applications before alternating to another fungicide with a non-QoI (Group 11) mode of action.  <i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i>  <i>Optional language if label has a single rate and interval range: If disease pressure is high, use the shortest interval.</i>  <i>Optional language if label has a rate range and interval range: If disease pressure is high, use the shortest interval and highest rate.</i>

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. A minimum of 15 gal./A for ground applications is recommended. For aerial applications a minimum of 10 gal./A of water is recommended.

**Specific Use Restrictions:**

- Do not apply more than 56 fl. oz./A of Quadris Top per crop.
- Do not apply more than 0.46 lb. ai/A per crop of difenoconazole-containing products.
- Do not apply more than 1.2 lb. ai/A per crop of azoxystrobin-containing products.
- Do not apply within 45 days of harvest (45-day PHI).

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<p><b>Peppers and Other Fruiting Vegetables:</b></p> <p>Peppers Bell Pepper Non-Bell Pepper Sweet Non-Bell Eggplant Okra</p> <p>See <b>Tomatoes</b> section for specific directions.</p>	<p>Anthracnose (<i>Colletotrichum</i> spp.)</p> <p>Cercospora Leaf Spot (<i>C. capsici</i>)</p> <p>Gray Leaf Spot (<i>Stemphyllium solani</i>)</p> <p>Powdery Mildew (<i>Oidiopsis sicula</i>)</p>	<p>8 - 14</p>	<p>Begin applications prior to disease development and continue throughout the season on a 7- to 10-day interval. Make no more than 2 consecutive applications before switching to another effective fungicide with a different mode of action.</p> <p><i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.</p> <p><i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.</p> <p><i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.</p> <p>The addition of a spreading/penetrating type adjuvant may enhance efficacy.</p>

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. A minimum of 15 gal./A for ground applications is recommended. For aerial applications a minimum of 10 gal./A of water is recommended.

**Specific Use Restrictions:**

- Do not apply more than 55.3 fl. oz./A/season of Quadris Top.
- Do not apply more than 0.46 lb. ai/A/season of difenoconazole-containing products.
- Do not apply more than 1.0 lb. ai/A/season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
Pistachios	Alternaria late blight ( <i>Alternaria</i> spp.)  Panicle and Shoot Blight ( <i>Botryosphaeria</i> <i>dothidea</i> )  Septoria leaf spot ( <i>S. pistaciarum</i> )	10 - 14	Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 14- to 21-day schedule, making no more than 2 sequential applications before alternating to another fungicide with a non-QoI (Group 11) mode of action.  <i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.  <i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.  <i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.
<p><b>Application:</b> For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. A minimum of 15 gal./A for ground applications is recommended. For aerial applications a minimum of 10 gal./A of water is recommended.</p>			
<p><b>Specific Use Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not use with an adjuvant.</li> <li>• Do not apply more than 56 fl. oz./A of Quadris Top per crop.</li> <li>• Do not apply more than 0.46 lb. ai/A per crop of difenoconazole-containing products.</li> <li>• Do not apply more than 1.5 lb. ai/A per crop of azoxystrobin-containing products.</li> <li>• Do not apply within 14 days of harvest (14-day PHI).</li> </ul>			

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
Potatoes	Black Dot <i>(Colletotrichum coccodes)</i>  Brown Spot <i>(Alternaria alternata)</i>  Early Blight <i>(Alternaria solani)</i>  Powdery Mildew <i>(Erysiphe cichoracearum)</i>  Septoria Leaf Spot <i>(S. lycopersici)</i>	8 - 14	Begin applications prior to disease development and continue throughout the season on a 7- to 14-day interval. Make no more than 2 consecutive applications before switching to another effective fungicide with a different mode of action.  <i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.  <i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.  <i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.  The addition of a spreading/penetrating type adjuvant may enhance efficacy.

**Application:** For best results, use sufficient water volume to provide thorough coverage. Quadris Top may be applied by ground, chemigation, or aerial application.

- Specific Use Restrictions:**
- Do not apply more than 55.3 fl. oz./A/season of Quadris Top.
  - Do not apply more than 0.46 lb. ai/A/season of difenoconazole-containing products.
  - Do not apply more than 2.0 lb. ai/A/season of azoxystrobin-containing products
  - Do not apply within 14 days of harvest (14-day PHI).

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
Soybean	Anthracnose ( <i>Colletotrichum truncatum</i> )  Alternaria leaf spot ( <i>Alternaria</i> spp.)  Brown spot ( <i>Septoria glycines</i> )  Cercospora blight and leaf spot ( <i>C. kikuchii</i> )  Frogeye leaf spot ( <i>Cercospora sojina</i> )  Pod and stem blight ( <i>Diaporthe phaseolorum</i> )  Powdery Mildew ( <i>Microsphaera diffusa</i> )	8-14	Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 7-10 day schedule making no more than 2 sequential applications before alternating to another fungicide with a different mode of action.  <i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.  <i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.  <i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground, chemigation, or aerial application. May be applied in a minimum of 2 gpa by air. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions:**

- 1) Do not apply more than 56 fl. oz. of Quadris Top per acre per season.
- 2) Do not apply more than 0.46 lb. ai/A/season of a difenoconazole containing product.
- 3) Do not apply more than 1.5 lb. ai/A/season of an azoxystrobin containing product.
- 4) Do not apply within 14 days of harvest.
- 5) Do not feed soybean hay, forage and silage.

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<b>Stone Fruit</b> Apricots Cherries, Sweet Cherries, Tart Nectarines Peaches Plums Plumcot Prunes  And cultivars and/or hybrids of these.	Brown rot blossom blight and fruit rot ( <i>Monilinia fructicola</i> , <i>M. laxa</i> )  Scab ( <i>Cladosporium                      carpophilum</i> )  Alternaria spot and fruit rot ( <i>A. alternata</i> )  Anthracnose ( <i>Colletotrichum                      spp.</i> )  Leaf rust ( <i>Tranzschelia                      discolor</i> )  Powdery mildew ( <i>Sphaerotheca                      pannosa</i> , <i>Podosphaera                      clandestina</i> )  Shot hole ( <i>Wilsonomyces                      carpophilus</i> )	8-14	For Brown rot blossom blight, begin applications at early bloom and continue through petal fall. For Brown rot on fruit, apply as needed a maximum of two sprays during the preharvest period up to the day of harvest (minimum of a 7-day retreatment interval). If high inoculum and severe disease conditions persist, apply a registered fungicide that is non-Group 11 or non-Group 9.  Follow the Brown rot blossom blight schedule. Make additional applications on a 10-14 interval from the end of petal fall to harvest.  <i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i>  <i>Optional language if label has a single rate and interval range: If disease pressure is high, use the shortest interval.</i>  <i>Optional language if label has a rate range and interval range: If disease pressure is high, use the shortest interval and highest rate.</i>

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. Stone fruit diseases are most effectively controlled by ground applications. A minimum of 15 gals./A for ground applications is recommended. For aerial applications a minimum of 10 gals./A of water is recommended.

- Specific Use Restrictions:**
- 1) Do not apply more than 56 fl. oz. of Quadris Top per crop per season.
  - 2) Do not apply more than 0.46 lb. ai/A/season of a difenoconazole containing product.
  - 3) Do not apply more than 1.5 lb. ai/A/season of an azoxystrobin containing product.
  - 4) Quadris Top may be applied on the day of harvest (0-day PHI).



Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<b>Strawberries and Other Low Growing Berries</b>  <b>See additional crops below.</b>	Anthracnose ( <i>Colletotrichum</i> spp.)  Leaf spot ( <i>Cercospora fragariae</i> )  Powdery mildew ( <i>Sphaerotheca macularis</i> )  Leaf rust ( <i>Phragmidium potentillae</i> )	8-14	Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 7-14 day schedule making no more than 2 sequential applications before alternating to another fungicide with a different mode of action.  <i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i>  <i>Optional language if label has a single rate and interval range: If disease pressure is high, use the shortest interval.</i>  <i>Optional language if label has a rate range and interval range: If disease pressure is high, use the shortest interval and highest rate.</i>
<b>Additional Low Growing Berries:</b> Bearberry, Bilberry, Cloudberry, Muntries, Partridgeberry			
<b>Application:</b> For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by ground, chemigation, or aerial application. A minimum of 15 gals./A for ground applications is recommended. For aerial applications a minimum of 10 gals./A of water is recommended. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.			
<b>Specific Use Restrictions:</b> <ol style="list-style-type: none"> <li>1) Do not apply more than 56 fl. oz. of Quadris Top per crop per season.</li> <li>2) Do not apply more than 0.46 lb. ai/A/season of a difenoconazole containing product.</li> <li>3) Do not apply more than 1.0 lb. ai/A/season of an azoxystrobin containing product.</li> <li>4) Quadris Top may be applied up to 0 day of harvest.</li> </ol>			

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
Sugar beets	<p>Cercospora leafspot (<i>C. beticola</i>)</p> <p>Powdery mildew (<i>Erysiphe polygoni</i>)</p>	10 - 14	<p>Begin applications prior to disease development and continue throughout the season on a 10- to 21-day interval. Make no more than 2 consecutive applications before switching to another effective fungicide with a different mode of action.</p> <p><i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i></p> <p><i>Optional language if label has a single rate and interval range: If disease pressure is high, use the shortest interval.</i></p> <p><i>Optional language if label has a rate range and interval range: If disease pressure is high, use the shortest interval and highest rate.</i></p> <p>The addition of a spreading/penetrating type adjuvant such as a non-ionic surfactant or crop oil concentrate or blend is recommended when applying by ground or air.</p>
<p><b>Application:</b> For best results, use sufficient water volume to provide thorough coverage. Quadris Top may be applied by ground, chemigation, or aerial application.</p>			
<p><b>Specific Use Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not apply more than 55.3 fl. oz./A/season of Quadris Top.</li> <li>• Do not apply within 7 days of harvest (7-day PHI).</li> <li>• Do not apply more than 2.0 lb. ai/A/season of azoxystrobin-containing products.</li> <li>• Do not apply more than 0.46 lb. ai/A/season of difenoconazole-containing products.</li> </ul>			

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<p>Tomatoes</p> <p>Tomatillo</p>	<p>Anthracnose (<i>Colletotrichum</i> spp.)</p> <p>Black Mold (<i>A. alternata</i>)</p> <p>Early Blight (<i>Alternaria solani</i>)</p> <p>Gray Leaf Spot (<i>Stemphylium</i> <i>botryosum</i>)</p> <p>Leaf Mold (<i>Fulvia fulva</i>)</p> <p>Powdery Mildew (<i>Leveillula taurica</i>)</p> <p>Septoria Leaf Spot (<i>S. lycopersici</i>)</p> <p>Target Spot (<i>Corynespora</i> <i>cassiicola</i>)</p>	<p>7.5 - 8</p>	<p>Begin applications prior to disease development and continue throughout the season on a 7- to 10-day interval. Make no more than 2 consecutive applications before switching to another effective fungicide with a different mode of action.</p> <p><i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i></p> <p><i>Optional language if label has a single rate and interval range: If disease pressure is high, use the shortest interval.</i></p> <p><i>Optional language if label has a rate range and interval range: If disease pressure is high, use the shortest interval and highest rate.</i></p> <p><b>Use of Adjuvants:</b> Under certain weather conditions (particularly high temperatures) Quadris Top in combination with high rates of silicone-based or oil containing (petroleum or crop) additives or adjuvants may cause injury. Do not exceed 0.125% adjuvant (v/v). Consult a Syngenta representative for more information concerning additives or adjuvants.</p> <p>A tank mixture with Dimethoate may cause crop injury.</p> <p>On fresh market tomatoes, do not use adjuvants or tank mix Quadris Top with any EC product.</p>

**Application:** For best results, use sufficient water volume to provide thorough coverage. Quadris Top may be applied by ground, chemigation, or aerial application.

**Specific Use Restrictions:**

- Do not apply more than 47 fl. oz./A/season of Quadris Top.
- Do not apply until 21 days after transplanting or 35 days after seeding.
- Do not use on varieties in which the mature tomatoes will be less than 2 inches (such as cherry tomatoes).
- Do not apply more than 0.46 lb. ai/A/season of difenoconazole-containing products.
- Do not apply more than 0.6 lb. ai/A/season of azoxystrobin-containing products.
- May be applied the day of harvest (0-day PHI).

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<p><b>Tree Nuts</b></p> <p>Beech Nut Brazil Nut Butternut Cashew Chestnut Chinquapin Hickory Macadamia Walnut, Black Walnut, English</p> <p>See specific Directions for <b>Almonds</b> <b>Filberts</b> <b>Pecans</b> <b>Pistachios</b></p>	<p>Foliar Diseases.</p>	<p>10 - 14</p>	<p>Begin applications prior to disease onset when conditions are conducive for disease. Apply Quadris Top on a 14- to 21-day schedule making no more than 2 sequential applications before alternating to another fungicide with a non-QoI (Group 11) mode of action.</p> <p><i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i></p> <p><i>Optional language if label has a single rate and interval range: If disease pressure is high, use the shortest interval.</i></p> <p><i>Optional language if label has a rate range and interval range: If disease pressure is high, use the shortest interval and highest rate.</i></p>
<p><b>Application:</b> For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. A minimum of 15 gal./A for ground applications is recommended. For aerial applications a minimum of 10 gal./A of water is recommended.</p>			
<p><b>Specific Use Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not use with an adjuvant.</li> <li>• Do not apply more than 56 fl. oz./A of Quadris Top per crop.</li> <li>• Do not apply more than 0.46 lb. ai/A per crop of difenoconazole-containing products.</li> <li>• Do not apply more than 1.2 lbs. ai/A per crop of azoxystrobin-containing products.</li> <li>• Do not apply within 45 days of harvest (45-day PHI).</li> </ul>			

Crop	Target Diseases	Use Rate fl. oz. product/A	Remarks
<p><b>Vegetables, Tuberous and Corm Subgroup</b></p> <p><i>For listing of crops in this group, see * below.</i></p> <p><i>See Potatoes for specific use directions.</i></p>	<p>Ascochyta Leaf Spot (<i>A. cynarae</i>)</p> <p>Black Dot (<i>Colletotrichum coccodes</i>)</p> <p>Brown Spot (<i>Alternaria alternata</i>)</p> <p>Early Blight (<i>Alternaria</i> spp.)</p> <p>Powdery Mildew (<i>Erysiphe cichoracearum</i>)</p> <p>Rust (<i>Uromyces betae</i>, <i>Puccinia helianthi</i>)</p> <p>Septoria Leaf Spot (<i>Septoria</i> spp.)</p>	<p>8 - 14</p>	<p>Begin applications prior to disease development and continue throughout the season on a 7- to 14-day interval. Make no more than 2 consecutive applications before switching to another effective fungicide with a different mode of action.</p> <p><i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i></p> <p><i>Optional language if label has a single rate and interval range: If disease pressure is high, use the shortest interval.</i></p> <p><i>Optional language if label has a rate range and interval range: If disease pressure is high, use the shortest interval and highest rate.</i></p> <p>The addition of a spreading/penetrating type adjuvant may enhance efficacy.</p>

\*Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Burdock, Canna, Cassava (bitter and sweet), Chayote (root), Chufa, Dasheen (Taro), Ginger, Leren, Sweet Potato, Tanier, Tumeric, Yam (bean and true).

**Application:** For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. A minimum of 15 gal./A for ground applications is recommended. For aerial applications a minimum of 10 gal./A of water is recommended.

**Specific Use Restrictions:**

- Do not apply more than 55.3 fl. oz./A/season of Quadris Top.
- Do not apply more than 0.46 lb. ai/A/season of difenoconazole-containing products.
- Do not apply more than 2.0 lb. ai/A/season of azoxystrobin-containing products.
- Do not apply within 14 days of harvest (14-day PHI).

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**Quadris Top Rate Conversion Table for Food Use**

Fl. oz. product/acre	Lb. ai azoxystrobin	Lb. ai difenoconazole
7.5	0.09	0.065
8.0	0.1	0.07
10.0	0.13	0.08
12.0	0.16	0.10
14.0	0.18	0.12
15.4	0.2	0.125

**[\*GOLF COURSE TURF - SPECIFIC DIRECTIONS FOR USE]**

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Use Rate (fl. oz. product per acre)	Application Interval (days)	Remarks*
Anthracnose ( <i>Colletotrichum cereale</i> ) (formerly known as <i>C. graminicola</i> )	0.25-0.70 (7-21 ml)	11.0-30.5 (322-902 ml)	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.  The maximum interval of application for greens is 14 days.
Brown Patch and Large patch ( <i>Rhizoctonia solani</i> )	0.25-0.45 (7-13 ml)	11.0-19.5 (322-580 ml)	14	For higher cut cool season turfgrass and St. Augustinegrass and centipedegrass (fairways, lawns, sod farms, etc. above 0.375 inch in height). Apply when conditions are favorable for disease development.

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Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Use Rate (fl. oz. product per acre)	Application Interval (days)	Remarks*
Brown Patch ( <i>Rhizoctonia solani</i> ) and other Rhizoctonia ( <i>R.</i> spp.) diseases such as Large Patch, Zoysia Patch, Leaf and Sheath Spot ( <i>R. zeae</i> )	0.45- 0.70  (13-21 ml)	19.5- 30.5  (580- 902 ml)	14-28	For brown patch, apply when conditions are favorable for disease development.  For large patch of all warm- season turfgrasses, make 1 or 2 applications in fall prior to infection or when conditions are favorable for infection.  For Zoysia patch, make 1 or 2 applications approximately one month prior to zoysiagrass dormancy. Reapply 14 to 28 days later.  For leaf and sheath spot ( <i>R.</i> <i>zeae</i> ), apply when conditions are favorable for infection such as sequential days, periods of temperatures at or above 90°F. Curative control may necessitate several applications. Target spray applications at crown of turfgrass.
Brown Ring Patch <i>Waitea circinata</i> var. <i>circinata</i>	0.45- 0.70  (13-21 ml)	19.5- 30.5  (580- 902 ml)	14-28	Apply when conditions are favorable for disease development.
Cool Weather Brown Patch, Yellow Patch ( <i>Rhizoctonia</i> <i>cerealis</i> )	0.70  (21 ml)	30.5  (902 ml)	28	Make 1 or 2 applications in fall or when conditions are favorable for disease development.
Dollar Spot ( <i>Sclerotinia</i> <i>homoeocarpa</i> )	0.25- 0.70  (7-21 ml)	11.0- 30.5  (322- 902 ml)	14-28	Apply preventatively when conditions are favorable for disease development. For non- residential turf, if dollar spot is active, use higher rates and combine with Daconil.

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Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Use Rate (fl. oz. product per acre)	Application Interval (days)	Remarks*
Fairy Ring ( <i>Lycoperdon</i> spp., <i>Agrocybe</i> <i>pediades</i> , and <i>Bovistra plumbea</i> )	0.45- 0.70  (13-21 ml)	19.5- 30.5  (580- 902 ml)	14-28	Apply as soon as possible after fairy ring symptoms develop. Apply in 2-4 gal. water per 1,000 sq. ft. Add the recommended rate of a wetting agent to the final spray. Severely damaged or thin turf may require reseeding. Fairy ring symptoms may take 2 to 3 weeks to disappear following application. If area is hydrophobic, use wetting agents and irrigate prior to application(s) of Quadris Top. Reapplication after 28 days may be required in some cases.
Microdochium Patch (Formerly known as Fusarium Patch) ( <i>Microdochium</i> <i>nivale</i> )	0.45- 0.70  (13-21 ml)	19.5- 30.5  (580- 902 ml)	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
**Gray Leaf Spot ( <i>Pyricularia grisea</i> )	0.45- 0.70  (13-21 ml)	19.5- 30.5  (580- 902 ml)	14-21	Use Quadris Top in a preventive disease control program. Begin applications before disease is present and alternate with other fungicide chemistries that control gray leaf spot.
Leaf Rust Stem Rust Stripe Rust ( <i>Puccinia</i> spp.)	0.45- 0.70  (13-21 ml)	19.5- 30.5  (580- 902 ml)	14-28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Leaf Spot ( <i>Bipolaris</i> <i>sorokiniana</i> )	0.45- 0.70  (13-21 ml)	19.5- 30.5  (580- 902 ml)	14-21	Apply when conditions are favorable for disease development.
Melting Out ( <i>Drechslera poae</i> )	0.45- 0.70  (13-21 ml)	19.5- 30.5  (580- 902 ml)	14-21	Apply when conditions are favorable for disease development
Necrotic Ring Spot ( <i>Ophiosphaerella</i> <i>korrae</i> )	0.70  (21 ml)	30.5  (902 ml)	14-28	Apply when conditions are favorable for disease development.



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Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Use Rate (fl. oz. product per acre)	Application Interval (days)	Remarks*
Pink Patch ( <i>Limonomyces roseipellis</i> )	0.45-0.70  (13-21 ml)	19.5-30.5  (580-902 ml)	14-28	Apply when conditions are favorable for disease development.
Powdery Mildew ( <i>Erysiphe graminis</i> )	0.45-0.70  (13-21 ml)	19.5-30.5  (580-902 ml)	14-28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Red Thread ( <i>Laetisaria fuciformis</i> )	0.45-0.70  (13-21 ml)	19.5-30.5  (580-902 ml)	14-28	Apply when conditions are favorable for disease development.
Southern Blight ( <i>Sclerotium rolfsii</i> )	0.45-0.70  (13-21 ml)	19.5-30.5  (580-902 ml)	14-28	Apply when conditions are favorable for disease development.
Summer Patch ( <i>Magnaporthe poae</i> )	0.45-0.70  (13-21 ml)	19.5-30.5  (580-902 ml)	14-28	Apply when conditions are favorable for disease development. Initiate applications when soil temperatures reach 65°F at a 2 inch soil depth.
Take-all Patch ( <i>Gaeumannomyces graminis var. avenae</i> )	0.35  (10 ml)	15.0  (451 ml)	28	Begin applications when conditions are favorable for disease infection prior to disease symptom development. Make two applications 28 days apart in the spring and two applications 28 days apart in the fall.

**\*Do not exceed 0.50 gallons Quadris Top per acre per year (1.45 fl. oz. Quadris Top per 1000 square feet per year).**

**\*\*Do not apply more than two sequential applications of Quadris Top for control of Gray Leaf Spot. For all other diseases when Gray Leaf Spot is not present, do not apply more than three sequential applications of Quadris Top.**

One gallon (128 fl. oz.) Quadris Top contains 1.67 lb. azoxystrobin and 1.05 lb. difenoconazole. **Do not apply more than 0.52 lb. difenoconazole per acre per year.**

One gallon = 3785 milliliters  
One fluid ounce (fl. oz.) = 29.6 milliliters

**[Quadris Top: Rate Conversion Chart for Turf]**

Fl. oz. Product Per 1000 Sq. Ft.	Fl. oz. Product Per Acre	Milliliters (ml) Product Per 1000 Sq. Ft.	Milliliters (ml) Product Per Acre	Maximum yearly applications
0.25	11	7	322	5
0.35	15	10	451	4
0.45	19.5	13	580	3
0.70	30.5	20.5	902	2

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**STORAGE AND DISPOSAL**

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

**Pesticide Storage**

Store in original container only. Store in a cool, dry and well-ventilated place. Protect from excessive heat. Keep container closed when not in use. Do not store near food or feed.

**Pesticide Disposal**

Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used 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 in proper disposal methods.

**Container Handling [5 gallons or less]**

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available.

Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available 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.

### **For Bulk and Minibulk Containers:**

#### **Container Handling**

**Non-refillable container.** Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available 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.

#### **Container Handling**

Refillable container. Refill this container with Quadris Top only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities. If the container is damaged or leaking, or obsolete, contact SYNGENTA CROP PROTECTION, LLC at 1-800-888-8372.

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.**

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Quadris Top™, the Syngenta logo, and the CP FRAME are trademarks of a Syngenta Group Company.

This product is protected by U.S. Patent Numbers 5,602,076 and 5,633,256.

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For non-emergency (e.g., current product information), call  
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, North Carolina 27419-8300  
SCP 1313A

[NON-DETACHABLE CONTAINER LABEL]

**GROUP 11 3 FUNGICIDES**

**Quadris Top™**

**Fungicide**

[A broad-spectrum fungicide for prevention and control of certain diseases in golf course turfgrass only.]

Active Ingredients:

Azoxystrobin* .....	18.2%
Difenoconazole** .....	11.4%
Other Ingredients:	70.4%
<b>Total:</b>	<b>100.0%</b>

\*CAS No. 131860-33-8

\*\*CAS No. 119446-68-3

Contains 1.67 lb. of azoxystrobin active ingredient and 1.05 lb. of difenoconazole active ingredient per gallon.

See additional precautionary statements and directions for use inside booklet.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Reg. No. 100-1313  
EPA Est.

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©201X Syngenta

Manufactured for:  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, North Carolina 27419-8300

SCP 1313A  
\_\_\_\_\_ quarts  
1 gallon  
2.5 gallons  
\_\_\_\_\_ gallons  
Net Contents

**KEEP OUT OF REACH OF CHILDREN.**

## **CAUTION**

### **FIRST AID**

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 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 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.

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

**HOT LINE NUMBER:** For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident)  
Call **1-800-888-8372**.

### **PRECAUTIONARY STATEMENTS**

#### **Hazards to Humans and Domestic Animals**

### **CAUTION**

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

**Environmental Hazards:** Difenoconazole is toxic to fish, mammals and aquatic invertebrates. Drift and runoff may be hazardous to **estuarine/marine** organisms in water adjacent to treated area.

Azoxystrobin is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Azoxystrobin can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to ground water under certain conditions as a result of agricultural use. This chemical may leach into ground water if used in areas where permeable, particularly where the water table is shallow.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This

product may contaminate water through drift or spray in wind. 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. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach surface water.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or regional office of the EPA.

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

Notify State and/or Federal authorities and Syngenta immediately if you observe any adverse environmental effects due to use of this product.

## **STORAGE AND DISPOSAL**

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rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available 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.

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.**

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