

2024-0337

2024-02-01

Previously approved 2023-3407 2023-12-19

This label has been updated according to the re-evaluation decision of Difenoconazole RVD2022-05. While users are encouraged to follow this updated label immediately, the previously approved label is valid until 21/04/2024 in accordance with the phase out period set out in the re-evaluation/special review decision of Difenoconazole RVD2022-05. This previously approved label will be provided upon request by emailing hc.ppra.info-arla.sc@canada.ca. In your email please include the product name and Registration number of the label you are requesting.

GROUP	11 3	FUNGICIDES
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QUADRIS TOP®

FUNGICIDE

SUSPENSION

COMMERCIAL - AGRICULTURAL

Fungicide for control or suppression of broad-spectrum diseases in labelled crops.

ACTIVE INGREDIENTS:

Azoxystrobin200 g/L
Difenoconazole.125 g/L

Contains 1,2-benzisothiazolin-3-one at 0.031% or 1,2-benzisothiazolin-3-one at 0.048% and 2-bromo-2-nitropropane-1,3-diol at 0.03% OR 5-chloro-2-methyl-4-isothiazolin-3-one at 0.00084% and 2-methyl-4-isothiazolin-3-one at 0.00028% plus 2-bromo-2-nitropropane-1,3-diol at 0.03% as preservatives.

**READ THE LABEL AND ATTACHED BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN**

CAUTION



POISON

**EYE IRRITANT
POTENTIAL SKIN SENSITIZER**

REGISTRATION NO: **30518**
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **0.5 L – 1000 L**

Syngenta Canada Inc.
140 Research Lane, Research Park
Guelph, Ontario N1G 4Z3
Telephone: 1-877-964-3682

Label

1.0 NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

2.0 FIRST AID

IN CASE OF POISONING, contact a physician or a poison control centre **IMMEDIATELY**. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

If swallowed, call a poison control centre or doctor **IMMEDIATELY** for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre 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 centre or doctor for treatment advice.

If inhaled, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre 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 centre or doctor for treatment advice.

3.0 TOXICOLOGICAL INFORMATION

There is no specific antidote. Treat symptomatically.

4.0 PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN AND ANIMALS. Potential skin sensitizer. Keep unused product in original container tightly closed, locked up and away from food.

Harmful if swallowed. May irritate eyes. Avoid contact with eyes.

RESTRICTED ENTRY INTERVAL (REI): For brassica (cole) Leafy vegetables (crop group 5) a restricted entry interval (REI) of 3 days is required for hand harvesting and an REI of 1 day is required for scouting. For all other crops and activities, DO NOT enter or allow worker entry into treated areas during the REI of 12 hours.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

If this pest control product is to be used on a commodity that may be exported to other countries

in the world and you require information on acceptable residue levels in these countries, please contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682.

5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear coveralls or long sleeved shirt and long pants, chemical resistant gloves, shoes and socks and protective eyewear (goggles or a face shield) when mixing, loading applying or during equipment clean up or repair. Gloves are not required during application within a closed cab.

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. After spraying, wash hands and shower thoroughly with soap and water.

Heavily contaminated or drenched clothing and other absorbent materials contaminated with this product should be discarded. Do not reuse them.

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.

Wear freshly laundered clothes daily.

Do not wear contaminated shoes.

Users should wash hands and exposed skin before eating, drinking, chewing gum, using tobacco, applying cosmetics or using the toilet.

While using product, do not eat, drink or use tobacco (including smoking).

6.0 ENVIRONMENTAL PRECAUTIONS

TOXIC to aquatic organisms, non-target terrestrial plants, fish and mammals. Observe spray buffer zones specified under DIRECTION FOR USE.

Toxic to certain beneficial arthropods (which may include predatory and parasitic insects, spiders and mites). Minimize spray drift to reduce harmful effects on beneficial arthropods in habitats next to the application site such as hedgerows and woodland.

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. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow may result in ground water contamination.

Do not apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats.

Do not contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

This product may contaminate water through drift and spray. To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body. Sound erosion control practices will reduce this products' potential to reach surface water. Provincial buffer zones must be observed.

Difenoconazole is persistent and may carryover. It is recommended that this product not be used in areas treated with any products containing difenoconazole during the previous season.

7.0 STORAGE

Keep in original container, tightly closed, during storage. Store in a cool, dry, well-ventilated area away from feed and foodstuffs, and out of the reach of children and animals. Store this product away from food or feed.

8.0 DISPOSAL

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for cleanup of spills.

For returnable containers:

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

For refillable containers:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

For recyclable containers:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsate to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING,

2024-0337

2024-02-01

Previously approved 2023-3407 2023-12-19

CALL 1-800-327-8633 (FASTMED)

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Pamphlet

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CALL 1-800-327-8633 (FASTMED)**

9.0 PRODUCT INFORMATION

QUADRIS TOP® is a broad-spectrum product containing two fungicides. It has preventative, systemic and curative properties. QUADRIS TOP provides control of leaf spots and powdery mildews. QUADRIS TOP is applied as a foliar spray in alternating spray programs with other crop protection products. All applications must be made according to the use directions that follow.

9.1 General Use Precautions

QUADRIS TOP is extremely phytotoxic to certain apple varieties. Avoid spray drift. Extreme care must be taken to prevent injury to apple trees (and apple fruit). DO NOT spray QUADRIS TOP where spray drift may reach apple trees.

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

Thorough coverage is necessary to provide good disease control. Applications using nozzles, sufficient water volume and pressure to provide thorough and uniform coverage generally provide the most effective disease control.

To avoid spray drift, do not apply when conditions favor drift beyond the target area. Avoid spray overlap, as crop injury may occur.

For more information on spray equipment and calibration, consult sprayer manufacturers and provincial recommendations.

10.0 DIRECTIONS FOR USE

10.1 General Information

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

Do not contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682 for information before applying any tank mix that is not specifically recommended on this label.

Syngenta Canada Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) of all potential tank mixes under all environmental conditions or for all crop varieties. Tank mixes that are not specifically listed on this label should be tested on a small area first, under local conditions and using standard practices, to confirm the tank mix is suitable for widespread application.

To determine the physical compatibility of this product with other products, use a jar test.

Always read and follow label directions including WALES mixing order.

Do not apply QUADRIS TOP through irrigation equipment.

10.2 Ground Application

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASABE) medium classification. Boom height must be 60 cm or less above the crop or ground.

Airblast application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. DO NOT apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

10.2.1 Mixing Instructions

Prepare only the amount of spray mixture that is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.

1. Add $\frac{1}{2}$ - $\frac{2}{3}$ of the required amount of water to the spray or mixing tank.
2. With the agitator running, add QUADRIS TOP to the tank. Add the tank-mix partner(s) into the tank in the same order as described below.
3. Continue agitation while adding the remainder of the water.
4. Begin application of the spray solution after QUADRIS TOP has completely dispersed into the mix water.
5. Maintain agitation until all of the mixture has been sprayed.
6. This product must not be mixed with any product which prohibits such mixing.

10.2.2 Spraying Instructions

1. Water Volume: Apply in a minimum spray volume of 150 L/ha OR the volume given in the crop and pest specific instructions tabulated below, whichever is LARGER.
2. Sprayer Agitation: Use a jet agitator or liquid sparge tube which recirculates 7-10% of the tank per minute. **DO NOT** use an air sparger.
3. Pump: Screens should be used to protect the pump and prevent clogging. Use 16 mesh or *coarser* screens on the suction side of the pump. **DO NOT** place a screen in the recirculation line. Use 50 mesh or *coarser* screens between the pump and boom unless directed otherwise by the sprayer manufacturer.
4. Spray Nozzles: 80° or 110° drift reducing flat fan (e.g. those with a pre-orifice or turbulence chamber) or air induction nozzles are recommended. Use 50 mesh nozzle screens or as recommended by the nozzle manufacturer. **DO NOT** use flood type nozzles, controlled droplet application equipment, spray foils or hollow cone nozzles.
5. Pressure: As recommended by the nozzle manufacturer to achieve no smaller than

- ASABE medium sized droplets.
6. Apply at uniform speed and avoid overlapping. Shut off spray boom while starting, turning, slowing or stopping to avoid potential crop injury from over application.

10.2.3 Equipment Clean-Up

Before Spraying:

- Prior to using QUADRIS TOP Fungicide, ensure that the spray tank, lines and filter are thoroughly clean.

After Spraying:

- Thoroughly clean application equipment immediately after spraying. **DO NOT** allow QUADRIS TOP Fungicide residue to dry within the spray tank.
- When using tank mixes, consult the tank-mix partner label for additional clean-up instructions.
- The following recommendations are provided:
 1. Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. **DO NOT** clean the sprayer near desirable vegetation, wells or other water sources.
 2. Remove all nozzles and screens and wash separately.
 3. Dispose of all rinsate in accordance with provincial regulations.

10.3 Aerial Application

10.3.1 General Precautions

Aerial application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASABE) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan. Apply at least 45 litres of water per hectare.

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *National Aerial Pesticide Application Manual*, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

10.3.2 Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking.

Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

10.3.3 Mixing Instructions

Mixing this product directly in the aircraft hopper **IS NOT** recommended. The use of chemical handling or managing equipment to load the hopper **IS** recommended. This product **MAY BE** inducted into a hopper which is prefilled with water or when the product and water are mixed prior to entering the hopper. This product **MAY BE** batch mixed and pumped into the hopper. In all cases the chemical handling equipment and hopper interior must be clean prior to use.

NOTE: WG and DF formulations are preferentially batch mixed.

NOTE: SC, SN, and SL formulations may be inducted or batch mixed.

NOTE: EC formulations are preferentially batch mixed.

It is **NOT** recommended to combine WG or DF formulations with tank mix partners within a single batch. Batch mix WG or DF formulations first, pump into the hopper, and then add tank mix partners by induction or as an additional batch mix.

1. Pump water into the hopper to at least $\frac{1}{4}$ to $\frac{1}{2}$ of the desired spray volume. Engage hopper circulation, if possible.
2. Thoroughly batch mix any WG or DF formulation mix partners and agitate to ensure complete mixing. Pump into the hopper.
3. Induct or thoroughly batch mix any SC formulations.
4. Thoroughly batch mix EC formulation mix partners. EC formulations may be added to the batch from Step 2, if desired.
5. Induct or thoroughly batch mix QUADRIS TOP and any solution (SN or SL) formulation mix partners. SN/SL formulations may be added to the batch from Step 2, if desired.
6. Pump batch mixed SC, EC, and/or SN/SL products into the hopper.
7. Finish filling the hopper with water.
8. If it was not possible to engage hopper agitation in Step 1, do so as soon as possible once airborne.
9. Spray the pesticide suspension the same day as mixing.
10. Do not mix, load or clean equipment where there is a potential to contaminate wells or aquatic systems.

10.3.4 Spraying Instructions

1. Water Volume: Apply in a spray volume of 45 L/ha. Appropriate water volumes aid good coverage.
2. Spray Nozzles: Use only ASABE medium nozzles rated as delivering droplets of volume median diameter of 236 microns or greater.
3. Pressure: As recommended by the nozzle manufacturer to achieve ASABE medium sized droplets.
4. Ensure hopper agitation is engaged whenever possible during flight.

10.3.5 Equipment Clean-Up

Before Spraying:

- Prior to using QUADRIS TOP Fungicide, ensure that the hopper, chemical handling equipment, lines and filter are thoroughly cleaned.

After Spraying:

- Thoroughly clean application equipment immediately after spraying. Do not allow QUADRIS TOP Fungicide residue to dry within application equipment.
- When using tank mixes, consult the tank-mix partner label for additional cleanup instructions.

- The following recommendations are provided:
 1. Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. **Do not** clean application equipment near desirable vegetation, flowering crops or weeds, wells or other water sources.
 2. Remove all nozzles and screens and wash separately.
 3. Dispose of all rinsate in accordance with provincial regulations.

10.4 Product Specific Precautions

Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

The spray buffer zones specified in the Buffer Zone table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Follow recommendations provided by local disease monitoring services or provincial spray calendars regarding the appropriate application timing for protectant fungicides in your area. Cultural practices such as canopy management and removal of overwintered plant debris should be integrated with the use of fungicides to reduce disease incidence. Use the higher rate, and the shorter application interval under conditions of heavy infection pressure, on highly susceptible varieties, or when environmental conditions are favourable for disease development.

QUADRIS TOP treatments should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, plant residue management, crop rotation, and proper timing and placement of fertilizer and irrigation. Fungicide applications should begin prior to disease infection and continue throughout the season following a resistance management strategy (see **Resistance Management Recommendations**).

10.5 Spray Buffer Zones

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label,
- Low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

The spray buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Spray Buffer Zones

Method of Application	Crop	Spray Buffer Zones (metres) Required for the Protection of:				
		Freshwater Habitats of Depths:		Estuarine/Marine Habitats of Depths:		Terrestrial Habitat
		Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer*	Potatoes and sweet potatoes, carrots, sugar beets, bulb vegetables, brassica leaf vegetables, dried shelled pea and bean, fruiting vegetables, cucurbits vegetables and globe artichoke	3	1	1	1	
	Low growing berry (Crop group 13-07G, except lowbush blueberry and cranberry)	1	1	1	1	1
Aerial	Potatoes	25	4	15	5	
Airblast	Potatoes and sweet potatoes, carrots, sugar beets, bulb vegetables, brassica leaf vegetables, dried shelled pea and bean, fruiting vegetables, and cucurbits vegetables	25	4	15	5	
Field sprayer and Chemigation	Lowbush Cranberry	1	1	1	1	1

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca web site.

10.6 Rotational Crop Restrictions

Do not plant any other crop for a period of 60 days following a QUADRIS TOP application to the preceding crop unless QUADRIS TOP and/or INSPIRE® are registered for that crop.

11.0 CROP USE DIRECTIONS

Apply the higher rate and shorter interval under conditions of high disease pressures.

NOT FOR USE IN GREENHOUSES APPLIED ALONE OR WITH ANY TANK MIX PARTNERS.

11.1 Potatoes and Sweet Potatoes

Crops	Potatoes and Sweet Potatoes
Diseases Controlled	Early Blight (<i>Alternaria solani</i>)
Rate	566 – 1000 mL/ha
Application Timing/Instructions	<p>Apply as a broadcast foliar spray in sufficient water (150 L/ha) for thorough coverage.</p> <p>For aerial application (potatoes only), apply in a minimum spray volume of 45 L/ha.</p> <p>Apply on a 7 to 14 day interval, starting prior to disease establishment.</p> <p>For Early Blight, use the high rate and the shortest application interval under high disease pressures.</p>
Application Interval	7 - 14 days
Crops	Potatoes
Diseases Suppressed	Brown Spot (<i>Alternaria alternata</i>) Black dot (<i>Colletotrichum coccodes</i>)
Rate	566 – 1000 mL/ha
Application Timing/Instructions	<p>Apply as a broadcast foliar spray in sufficient water (150 L/ha) for thorough coverage.</p> <p>For aerial application, apply in a minimum spray volume of 45 L/ha.</p> <p>Apply prior to disease. Apply no more than 1 application per year to target these diseases.</p> <p>If disease pressure is high, use the highest rate.</p>
Crops	Potatoes
Diseases Suppressed	White mould (<i>Sclerotinia sclerotiorum</i>)
Rate	1000 mL/ha
Application Timing/Instructions	<p>Apply as a broadcast foliar spray in sufficient water (150 L/ha) for thorough coverage.</p> <p>For aerial application, apply in a minimum spray volume of 45</p>

	L/ha. Begin applications at full bloom. Repeat applications at intervals of 7 to 10 days.
Application Interval	7 - 10 days
Pre-Harvest Interval	14 days
Maximum Number of Applications per Year	3
Restrictions:	
1. DO NOT apply more than 1 treatment of QUADRIS TOP before alternating to another fungicide with a non-QoI (Group 11) mode of action. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program.	

11.2 Carrots

Crops	Carrots
Diseases Controlled	Leaf blight (<i>Alternaria dauci</i>) Cercospora leaf spot (<i>Cercospora carota</i>)
Rate	566 – 1000 mL/ha
Application Timing/Instructions	Apply as a broadcast foliar spray in sufficient water (150 L/ha) for thorough coverage. Apply on a 7 to 14 day interval, starting prior to disease establishment. If disease pressure is high, use the highest rate and shortest interval.
Application Interval	7 - 14 days
Pre-Harvest Interval	7 days
Maximum Number of Applications per Year	3
Restrictions:	
1. DO NOT apply more than 1 treatment of QUADRIS TOP before alternating to another fungicide with a non-QoI (Group 11) mode of action. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program.	

11.3 Sugar Beets

Crops	Sugar beets
Diseases Controlled	Cercospora leaf spot (<i>Cercospora beticola</i>) Powdery mildew (<i>Erysiphe polygoni</i>)
Rate	566 – 1000 mL/ha
Application Timing/Instructions	Apply on a 7 to 28 day schedule, alternating with a non-triazole fungicide (non-Group 3) that is registered for sugar beets for these diseases. If disease pressure is high, use the highest rate and shortest interval.
Application Interval	7 - 28 days
Pre-Harvest Interval	7 days
Maximum Number of Applications per Year	3
Restrictions:	
1. DO NOT apply more than 1 treatment of QUADRIS TOP before alternating to another fungicide with a non-Qol (Group 11) mode of action. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program.	

11.4 Bulb Vegetables

Crops	Bulb vegetables Dry bulb: Onion, bulb; Onion, Chinese, bulb; Garlic, bulb; Garlic, great-headed (elephant); Shallot, bulb Green Onion: Green onions; Leek; Welch onion; Chives, fresh leaves; Chives, Chinese; Shallot, fresh leaves; Lady's leek, Onion, fresh' Onion, tree, tops; Wild leek
Diseases Controlled	Purple blotch (<i>Alternaria porri</i>) Downy mildew (<i>Peronospora destructor</i>) Botrytis leaf blight (<i>Botrytis squamosa</i>)
Diseases Suppressed	Leaf Blotch (<i>Cladosporium allii-cepae</i>)* Stemphylium leaf blight (<i>S. vesicarium</i>)*
Rate	710 - 1000 mL/ha
Application Timing/Instructions	*Apply no more than 1 application to target this disease. Apply as a broadcast foliar spray in sufficient water for thorough coverage. A minimum spray volume of 150 L/ha is recommended. Apply on a 7 to 14 day interval, starting prior to disease onset when conditions are conducive to disease. If disease pressure is high, use the highest rate and shortest interval.
Application Interval	7 - 14 days
Pre-Harvest Interval (PHI)	7 days
Maximum Number of Applications per Year	4 on dry bulb onions subgroup 3 on green onions subgroup
Restrictions:	

1. DO NOT apply more than 1 treatment of QUADRIS TOP before alternating to another fungicide with a non-Qol (Group 11) mode of action. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program.
2. DO NOT apply by air.

11.5 Crop Subgroup 5A: Head and Stem Brassica

Crops	Crop Subgroup 5A: Head and Stem Brassica Broccoli; Chinese Broccoli (gai lon); Brussels sprouts; Cabbage; Chinese cabbage (napa); Chinese mustard cabbage (gai choy); Cauliflower; Cavalo broccolo; Kohlrabi. Including all cultivars and/or hybrids of these.
Diseases Controlled	Alternaria blight (<i>Alternaria brassicae</i> , <i>A. raphani</i>) Powdery mildew (<i>Erysiphe polygoni</i>)*
Rate	710 - 1000 mL/ha
Application Timing/Instructions	Apply as a broadcast foliar spray in sufficient water for thorough coverage. A minimum spray volume of 150 L/ha is recommended. Apply on a 10 to 14 day interval, starting prior to disease onset when conditions are conducive to disease. If disease pressure is high, use the highest rate and shortest interval.
Application Interval	10 - 14 days
Pre-Harvest Interval	3 days
Maximum Number of Applications per Year	4
Restrictions:	
<ol style="list-style-type: none"> 1. DO NOT apply more than 1 treatment of QUADRIS TOP before alternating to another fungicide with a non-Qol (Group 11) mode of action. *Do not apply more than 2 sequential applications of group 3 fungicides before alternating to another mode of action fungicide registered for the same use. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program. 2. DO NOT apply by air. 	

11.6 Crop Subgroup 5B: Leafy Brassica Greens

Crops	Crop Subgroup 5B: Leafy Brassica Greens Broccoli raab; Chinese cabbage (bok choy); Collard; Kale; Mizuna; Mustard greens; Mustard spinach; Rape greens. Including all cultivars and/or hybrids of these.
Diseases Controlled	Alternaria blight (<i>Alternaria brassicae</i> , <i>A. raphani</i>) Powdery mildew (<i>Erysiphe polygoni</i>)*
Rate	710 - 1000 mL/ha
Application Timing/Instructions	Apply as a broadcast foliar spray in sufficient water for thorough coverage. A minimum spray volume of 150 L/ha is recommended. Apply on a 10 to 14 day interval, starting prior to disease onset when conditions are conducive to disease. If disease pressure is high, use the highest rate and shortest interval.
Application Interval	10 - 14 days

Pre-Harvest Interval	3 days
Maximum Number of Applications per Year	4
Restrictions:	
<ol style="list-style-type: none"> DO NOT apply more than 1 treatment of QUADRIS TOP before alternating to another fungicide with a non-Qol (Group 11) mode of action. *Do not apply more than 2 sequential applications of group 3 fungicides before alternating to another mode of action fungicide registered for the same use. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program. DO NOT apply by air. 	

11.7 Crop Subgroup 6C: Dried Shelled Pea and Bean (except Soybean)

Crops	Crop Subgroup 6C: Dried shelled pea and bean (except soybean) Any dried cultivar of bean (<i>Phaseolus</i> spp.); and dried cultivar of pea (<i>Pisum</i> spp.): dried cultivars of bean (<i>Lupinus</i> spp.) (includes grain lupin, sweet lupin, white lupin, and sweet white lupin); (<i>Vigna</i> spp.) (includes adzuki beans); (<i>Phaseolus</i> spp.) (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean, mung bean, rice bean, southern bean, urd bean); broad bean (dry); chickpea; guar; lablab bean; lentil; pea (<i>Pisum</i> spp.) (includes field pea); and pigeon pea.
Diseases Controlled	Ascochyta blight (<i>Ascochyta</i> spp.) Anthracnose (<i>Colletotrichum</i> spp.)
Rate	625 mL/ha
Application Timing/Instructions	One application must be applied before disease is established and no later than the onset of flowering. A second application can be made 7-14 days after the first application, when disease pressure is severe or when agronomic or weather conditions are conducive to disease development or movement.
Application Interval	7 - 14 days
Crops	Pea (<i>Pisum</i> spp.) including field pea
Diseases Controlled	Mycosphaerella blight (<i>Mycosphaerella pinodes</i>)
Rate	625 mL/ha
Application Timing/Instructions	One application must be applied before disease is established and no later than the onset of flowering. A second application can be made 7-14 days after the first application, when disease pressure is severe or when agronomic or weather conditions are conducive to disease development or movement.
Application Interval	7 - 14 days
Pre-Harvest Interval	30 days for all crops listed above except dry pea hay 14 days for dry pea hay.
Maximum Number of Applications per Year	2
Restrictions:	
<ol style="list-style-type: none"> DO NOT apply more than 1 treatment of QUADRIS TOP before alternating to another fungicide with a non-Qol (Group 11) mode of action. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program. 	

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| <ol style="list-style-type: none"> 2. . Do not make more than one application to dry pea hay.. Do not feed dried pea vines to livestock. 3. Not all members of the legume vegetable group 6C have been tested for efficacy and phytotoxicity at the recommended label rates, and should be used at the discretion of the user. |
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11.8Crop Group 8-09: Fruiting Vegetables

Crops	Crop Group 8-09: Fruiting vegetables African eggplant, Bush tomato, Cocona, Currant tomato, Eggplant, Garden huckleberry, Goji berry, Groundcherry, Martynia, Naranjilla, Okra, Pea eggplant, Pepino, Pepper (bell and non-bell), Roselle, Scarlet eggplant, Sunberry, Tomatillo, Tomato, Tree tomato. Cultivars, varieties and/or hybrids of these
Diseases Controlled	Early Blight (<i>Alternaria solani</i>) Anthraco se (<i>Colletotrichum</i> spp.) Septoria leaf spot (<i>Septoria lycopersici</i>) Powdery Mildew (<i>Oidiopsis sicula</i> ; <i>Leveillula taurica</i>)
Rate	625 mL/ha
Application Timing/Instructions	Apply as a broadcast foliar spray in sufficient water for thorough coverage. Apply on a 7 to 10 day interval, starting at first fruit set for all diseases except Early blight apply on a 7 to 14 day interval, starting prior to disease establishment. If disease pressure is high, use the shortest interval.
Application Interval	7 - 10 days for all diseases listed above except Early Blight 7 - 14 days for Early Blight
Pre-Harvest Interval	1 day
Maximum Number of Applications per Year	3
Restrictions:	
<ol style="list-style-type: none"> 1. DO NOT apply more than 1 treatment of QUADRIS TOP before alternating to another fungicide with a non-Qol (Group 11) mode of action. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program. 2. To avoid damage to tomatoes, QUADRIS TOP should not be applied within 6 days, either before or after, a broadcast application of metribuzin. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program. 3. QUADRIS TOP should not be applied until 21 days after transplanting or 35 days after seeding. 	

11.9 Eggplant, Peppers and Tomatoes

Crops	Eggplant, peppers and tomatoes
Diseases Suppressed	Cercospora leafspot (<i>C. capsici</i>)
Rate	625 mL/ha
Application Timing/Instructions	Apply as a broadcast foliar spray in sufficient water for thorough coverage. Apply starting at first fruit set. Apply no more than 1 application to target this disease.
Crop	Tomatoes only
Diseases Controlled	Early Blight (<i>Alternaria solani</i>) Anthrachnose (<i>Colletotrichum</i> spp.)
Rate	375-625 mL/ha
Application Timing/Instructions	Apply as a broadcast foliar spray in sufficient water for thorough coverage. For anthracnose, apply on a 7 to 10 day interval, starting at first fruit set. For Early blight, apply on a 7 to 14 day interval, starting prior to disease establishment. Use the low rate only when disease pressure is expected to be low. If disease pressure is high, use the shortest interval and highest rate.
Application Interval	7 - 10 days for Anthracnose 7 - 14 days for Early Blight
Pre-Harvest Interval	1 day
Maximum Number of Applications per Year	1 for Cercospora leaf spot 3 for Early blight and Anthracnose
Restrictions:	
<ol style="list-style-type: none"> 1. DO NOT apply more than 1 treatment of QUADRIS TOP before alternating to another fungicide with a non-Qol (Group 11) mode of action. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program. 2. To avoid damage to tomatoes, QUADRIS TOP should not be applied within 6 days, either before or after, a broadcast application of metribuzin. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program. 3. QUADRIS TOP should not be applied until 21 days after transplanting or 35 days after seeding. 	

11.10 Cucurbit Vegetables

Crops	Cucurbit vegetables Chinese waxgourd; Citron melon; Cucumber (field); Gerkin; Gourd, edible; Momordica spp.; Muskmelons (includes cantaloupe); Pumpkin; Squash, summer (includes zucchini); Squash, winter; Watermelon. Including cultivars and/or hybrids of these.
Diseases Controlled	Powdery mildew (<i>Sphaerotheca fuliginea</i> , <i>Erysiphe cichoracearum</i>) Alternaria leaf blight (<i>Alternaria cucumerina</i>) Anthracnose (<i>Colletotrichum orniculare</i> , <i>C. lagenarium</i>) Gummy stem blight (<i>Didymella bryoniae</i>) (Suppression)
Rate	710 - 1000 mL/ha
Application Timing/Instructions	Apply as a broadcast foliar spray in sufficient water for thorough coverage. A minimum spray volume of 150 L/ha is recommended. For gummy stem blight, a minimum spray volume of 190 L/ha is recommended. Apply on a 7 to 14 day interval, starting prior to disease onset when conditions are conducive to disease. If disease pressure is high, use the highest rate and shortest interval.
Application Interval	7 - 14 days
Pre-Harvest Interval (PHI)	1 day
Maximum Number of Applications per Year	4
Restrictions:	
<ol style="list-style-type: none"> DO NOT apply more than 1 treatment of QUADRIS TOP before alternating to another fungicide with a non-Qol (Group 11) mode of action. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program. DO NOT apply by air. 	

12.0 MINOR USES

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Syngenta Canada Inc. under the User Requested Minor Use Label Expansion program. For these uses, Syngenta Canada Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

12.1 Lowbush Cranberries

LOWBUSH CRANBERRIES – FOLIAR OR SPRINKLER CHEMIGATION APPLICATION	
Diseases Controlled	Fruit rots (blotch rot (<i>Physalospora vaccinia</i>) Ripe rot (<i>Coleophoma empetri</i>) End rot (<i>Fusicoccum putrefaciens</i> syn. <i>Godronia cassandrae</i>) Bitter rot (<i>Colletotrichum acutatum</i>, <i>Glomerella cingulata</i> syn. <i>C. gloeosporioides</i>) Viscid rot (<i>Phomopsis vacinii</i>) Black rot (<i>Allantophomopsis lycopodina</i>) Cottonball (<i>Monilinia oxycocci</i>)
RATE	1.0 L/ ha
Application Timing	Begin applications at 5-10% bloom for fruit rots and cottonball rot. Continue applications on a 7-10 day schedule if conditions are favorable for disease development. Apply in sufficient water for thorough coverage. Use a minimum 100L/ha for foliar application or a minimum of 1000 L/ha for chemigation application.
Application Interval	7 - 10 days
Pre-Harvest Interval (PHI)	30 days
Maximum Number of Applications per Year	3
Restrictions:	
<ol style="list-style-type: none"> 1. DO NOT apply by air. DO NOT apply by chemigation if applied by foliar broadcast spray. DO NOT apply by foliar spray if applied by chemigation. 2. Do not treat lowbush cranberry fields used for aquaculture of fish and crustacea. 3. Do not apply when weather conditions favor drift from treated areas to non-target aquatic habitat. Applicators should use care in making applications near non-target aquatic habitats. 4. Do not apply to flooded crop. 5. Do not allow release of irrigation or flood water to non-target aquatic habitat for at least 14 days after the last application. 6. Do not allow spray pattern to exceed the enclosed bed area 7. Do not apply more than one application of QUADRIS TOP or other Group 11 fungicides before alternation with a fungicide registered for the same use that is not in Group 11. 	

CHEMIGATION APPLICATION FOR LOWBUSH CRANBERRY

Chemigation: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASABE S572.1) medium classification. Applications **MUST** be conducted **WITHOUT** the use of end guns.

Types of Irrigation Systems: QUADRIS TOP may be applied through sprinkler type irrigation systems only, such as overhead solid set irrigation systems. Do not apply QUADRIS TOP through any other type of irrigation system.

Injection for Chemigation: Inject the specified dosage of QUADRIS TOP into the irrigation main water stream: (1) through a constant flow, metering device; (2) into the center of the main line flow via a pitot tube or equivalent; (3) at a point ahead of at least one, right angle turn in the main stream flow such that thorough mixing with the irrigation water is ensured.

Uniform Water Distribution and System Calibration: The irrigation system must provide uniform distribution of QUADRIS TOP treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in or on the crop can result from non-uniform distribution. The system must be calibrated to uniformly distribute the rates specified for chemigation application. If you have questions about calibration, contact a provincial agricultural specialist, equipment

manufacturers, or other experts.

Chemigation Monitoring: 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.

Required Injection and Sprinkler System Safety Devices: The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor/engine stops; or in cases where there is no water pump, when water pressure decreases to the point where pesticide distribution is adversely affected. Injection systems must use a metering pump or equivalent, such as a positive displacement injection pump (e.g., diaphragm pump, venture injection) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Using Water from Public Water Systems: Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, 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. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Cleaning the Chemical Injection System: In order to apply pesticides accurately, the chemical injection system must be kept clean, free of chemical or fertilizer residues and sediments. Refer to your owner's manual or ask your equipment supplier for the cleaning procedure for your injection system.

Flushing the Irrigation System: At the end of the application period, allow time for all lines to flush the pesticide through all nozzles or emitters before turning off irrigation water. To ensure the lines are flushed and free of pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

Solid Linear Systems: Injection should be during the last 30 minutes of regular irrigation period

or as a separate 30 minute application not associated with a regular irrigation.

12.2 Crop Subgroup 13-07G – Berry, Low Growing, except Lowbush Blueberry and Cranberry

Berry, Low Growing, Subgroup 13-07G, except Lowbush Blueberry and Cranberry Bearberry; Bilberry; Cloudberry; Lingonberry; Muntries; Partridgeberry; Strawberry; cultivars, varieties, and/or hybrids of these.	
Diseases Controlled	Anthracnose (<i>Colletotrichum</i> spp.) Powdery Mildew (<i>Sphaerotheca macularis</i>)
Rate	0.870 - 1.0 L/ha
Application Timing	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 2 sequential applications before alternating to another fungicide with a different mode of action. If disease pressure is high, use the shortest interval and highest rate.
Water Volume	For best results, sufficient water volume (minimum 150 L/ha) must be used to provide thorough coverage.
Application Interval	7 - 14 days
Pre-Harvest Interval (PHI)	1 day
Maximum Number of Applications per Year	3
Maximum Amount of Product per Year	3 L/ha/year
Restrictions: 1. DO NOT apply by air.	
FOR STRAWBERRY ONLY: Do not exceed 512 g ai/ha difenoconazole containing products per season.	

12.3 Artichoke, Globe

ARTICHOKE, GLOBE	
Diseases Controlled	Powdery Mildew (<i>Leveillula taurica</i> , <i>Erysiphe cichoracearum</i>)
Diseases Suppressed	Ramularia leaf spot and Ramularia bud spot (<i>Ramularia cynarae</i>)
Rate	0.730-1.025 L/ha
Application Timing	Begin applications prior to disease onset when conditions are conducive for disease. Apply on a 14-day interval. Apply as a broadcast foliar spray in sufficient water (minimum 500 L/ha) for thorough coverage.
Application Interval	14 days
Pre-Harvest Interval (PHI)	3 days
Maximum Number of Applications per Year	4
Restrictions:	
<ol style="list-style-type: none"> DO NOT apply more than 1 treatment of QUADRIS TOP Fungicide before alternating to another fungicide with a non-Qol (Group 11) mode of action. DO NOT apply more than 1 application of QUADRIS TOP Fungicide per crop season if a non-group 11 alternative product is not available for the targeted disease. DO NOT apply by air. 	

13.0 RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that QUADRIS TOP contains a strobilurin fungicide in Group 11 and a triazole fungicide in Group 3. Any fungal population may contain individuals naturally resistant to QUADRIS TOP and other Group 11 and 3 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance:

Where possible, rotate the use of QUADRIS TOP or other Group 11 and 3 fungicides with different groups that control the same pathogens.

Do not exceed the total number of applications of QUADRIS TOP per season per crop as stated in Table Application Limitations and Preharvest Intervals below.

Use tank mixtures with fungicides from a different group that is effective on the target pathogen when such use is permitted.

Fungicide use should be based on an integrated disease management program that includes scouting, historical information related to pesticide use and crop rotation and considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.

Where possible, make use of predictive disease models to effectively time fungicide applications.

Monitor treated fungal populations for resistance development. Notify Syngenta Canada Inc. if

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reduced sensitivity of the pathogen to Quadris Top is suspected.

If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different site of action, if available.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.

Application Limitations and Preharvest Intervals

Crop	PHI Interval(days)	Maximum number of applications per year
Potatoes and sweet potatoes	14	3
Carrots and sugar beets	7	3
Bulb Vegetables (dry bulb onion)	7	4
Bulb Vegetables (green onion)	7	3
Head and Stem Brassica and Leafy Brassica Greens	3	4
Dried shelled pea and bean	30	2
Fruiting Vegetables	1	3
Cucurbit Vegetables	1	4
Global Artichoke	3	4
Lowbush Cranberry	30	3
Crop group 13-07G except Lowbush Blueberry and Cranberry	1	3

For further information and to report suspected resistance, contact company representatives at 1-877-SYNGENTA (1-877-964-3682) or at www.syngenta.ca.

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