



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

September 12, 2019

Ricky Kyaw  
Regulatory Product Manager  
Syngenta Crop Protection, LLC  
PO Box 18300  
Greensboro, NC 27419

Subject: Registration Review Label Mitigation for Azoxystrobin, Fludioxonil and Mefenoxam  
Product Name: Quartet Cotton Seed Treatment Fungicide  
EPA Registration Number: 100-1286  
Application Dates: 2/1/2019  
Decision Numbers: 555013; 555014; 555015

Dear Mr. Kyaw:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with Azoxystrobin, Fludioxonil and Mefenoxam Interim Decisions, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

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EPA Reg. No. 100-1286  
Decision No. 555013; 555014; 555015

If you have any questions about this letter, please contact Darius Stanton by phone at 703-347-0433, or via email at [Stanton.Darius@epa.gov](mailto:Stanton.Darius@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington".

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

(MASTER)

DIFENOCONAZOLE	GROUP	3	FUNGICIDE
MEFENOXAM	GROUP	4	FUNGICIDE
AZOXYSTROBIN	GROUP	11	FUNGICIDE
FLUDIOXONIL	GROUP	12	FUNGICIDE

**Quartet Cotton Seed Treatment Fungicide™**

**Fungicide**

Broad-spectrum seed treatment fungicide for control of seed and seed borne diseases in cotton.

Active Ingredients:

Azoxystrobin <sup>1</sup> .....	5.24%
Fludioxonil <sup>2</sup> .....	0.87%
Mefenoxam <sup>3</sup> .....	2.62%
Difenoconazole <sup>4</sup> .....	0.35%
Other Ingredients:	90.92%
Total:	100.00%

<sup>1</sup>(CAS No. 131860-33-8)

<sup>2</sup>(CAS No. 131341-86-1)

<sup>3</sup>(CAS No. 70630-17-0 and 69516-34-3)

<sup>4</sup>(CAS No. 119446-68-3)

Contains 0.48 pound azoxystrobin, 0.08 pound fludioxonil, 0.21 pound mefenoxam and 0.03 pound difenoconazole per gallon

**KEEP OUT OF REACH OF CHILDREN.**

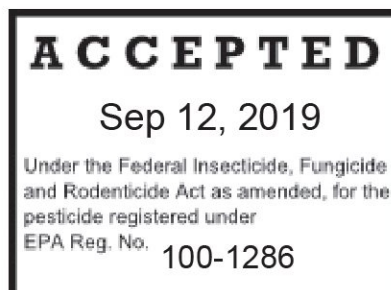
**CAUTION**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1286

EPA Est. No.

\_\_\_ gallons  
Net Contents



<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 do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</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>
<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 inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<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>	

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## **PRECAUTIONARY STATEMENTS**

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

#### **CAUTION**

Harmful if swallowed. Wash thoroughly with soap and water after handling.

### **Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are listed below.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, or polyvinyl chloride (PVC)  $\geq$  14 mils or Viton®  $\geq$  14 mils
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations**

**Users should:**

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

**Environmental Hazards**

This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Do not contaminate water when disposing of equipment washwater or rinsate. If treated seed is spilled outdoors, or in areas accessible to birds or endangered species, promptly clean up and dispose of properly to prevent ingestion.

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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, Inc. 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 the 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.

Treatment of highly mechanically damaged seed, or seed of known low vigor and poor quality, may result in reduced germination and/or reduction of seed and seedling vigor. Treat and conduct germination test on a small portion of seed before committing the total seed lot to a selected chemical treatment. Due to seed quality conditions beyond the control of Syngenta Crop Protection, no claims are made to guarantee germination of carry-over seed.

Due to seed quality, crop or variety sensitivity, and seed storage conditions beyond the control of Syngenta, no claims are made to guarantee the germination of seed or propagating material for all crop seed when treated with Quartet Cotton Seed Treatment Fungicide.

**MAXIMUM USAGE WHEN APPLYING METALAXYL- AND MEFENOXAM-CONTAINING PRODUCTS TO THE SAME CROP WITHIN THE SAME SEASON: DO NOT APPLY MORE THAN THE MAXIMUM YEARLY TOTAL APPLICATION RATE FOR THE ACTIVE INGREDIENT AS STATED ON THE LABEL OF THE PRODUCT CONTAINING THE LOWEST YEARLY TOTAL ON THAT CROP.**

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

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### PRODUCT INFORMATION

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Quartet Cotton Seed Treatment Fungicide is a broad spectrum, preventative seed treatment fungicide with systemic and contact properties recommended for the control of many important plant diseases. Quartet Cotton Seed Treatment Fungicide may be applied in tank mixes, or sequentially with other registered, seed treatment products. If using Quartet Cotton Seed Treatment Fungicide in a tank mixture with other seed treatment products, observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations, which appear on the tank mix partner label. No label dosage should be exceeded and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product, which prohibits such mixing.

For use in commercial seed treatment operations only. Not for use in planter or hopper box applications.

All applications should be made according to the use directions that follow.

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## USE PRECAUTIONS

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If necessary, cotton may be replanted immediately after last planting.

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## USE RESTRICTION

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Do not plant other crops sooner than 45 days after last planting.

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## RESISTANCE MANAGEMENT

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<b>DIFENOCONAZOLE</b>	<b>GROUP</b>	<b>3</b>	<b>FUNGICIDE</b>
<b>MEFENOXAM</b>	<b>GROUP</b>	<b>4</b>	<b>FUNGICIDE</b>
<b>AZOXYSTROBIN</b>	<b>GROUP</b>	<b>11</b>	<b>FUNGICIDE</b>
<b>FLUDIOXONIL</b>	<b>GROUP</b>	<b>12</b>	<b>FUNGICIDE</b>

For resistance management, please note that Quartet Cotton Seed Treatment contains Group 3/difenoconazole, Group 4/mefenoxam, Group 11/azoxystrobin, and Group 12/fludioxonil fungicides. Any fungal population may contain individuals naturally resistant to Quartet Cotton Seed Treatment and other Group 3, Group 4, Group 11, and Group 12 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

Difenoconazole belongs to the triazole class of chemistry and is a demethylation inhibitor of sterol biosynthesis (DMI) which disrupts membrane synthesis of the fungal cell. Mefenoxam belongs to the phenylamide class of chemistry which interferes with fungal RNA synthesis. Azoxystrobin belongs to the strobilurin class of chemistry which disrupts cellular respiration and energy generation. Fludioxonil belongs to the phenylpyrrole class of chemistry which interferes with osmotic signal transduction.

To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of Quartet Cotton Seed Treatment Fungicide or other Group 3, Group 4, Group 11, and Group 12 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicide from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which 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. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crop and pathogens.
- For further information or to report suspected resistance contact Syngenta at 1-866-Syngent(a) (866-796-4368). You can also contact your pesticide distributor or university extension specialist to report resistance.

Syngenta encourages responsible product stewardship to ensure effective long term control of the fungal diseases on this label.

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## MIXING INSTRUCTIONS

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Apply Quartet Cotton Seed Treatment Fungicide as a water based slurry using seed treatment application equipment that will provide uniform coverage on the seed surface. Consult the manufacturer of the application equipment being used for calibration and operation procedures.

Quartet Cotton Seed Treatment Fungicide mixes easily with water and other water based seed treatments manufactured by Syngenta. When mixing with products from other manufacturers, the compatibility should be tested prior to use by conducting a jar test. Mix all intended seed treatments with the appropriate amount of water in a clear glass container. Mix well and let sit for one hour. Remix and observe for incompatibility.

Mixing Quartet Cotton Seed Treatment Fungicide with tank mix partners: Add ½ of the required water to the mix tank and turn on the agitation. Mechanical agitation is preferred. If using wettable powders and/or products in water-soluble pouches, add them first to clean water allowing them to completely disperse prior to adding Quartet Cotton Seed Treatment Fungicide or other products. Allow each tank-mix partner to completely disperse before adding the next product. Add the remaining amount of water and agitate. Maintain agitation until the entire slurry mixture has been used. Allow seed to dry prior to bagging.

**Note:** Federal law requires that bags of treated seeds shall be labeled with the following information. “This seed has been treated with azoxystrobin, fludioxonil, difenoconazole and mefenoxam fungicides. Do not use for food, feed or oil purposes. Store away from food and feedstuffs. Do not apply more than 0.01 lb ai /Acre/calendar year (4.7 g ai/Acre/calendar year) of mefenoxam as a seed treatment on Cotton. Do not apply more than 0.125 lb ai/Acre/calendar year (56.7 g ai/Acre/calendar year) of

mefenoxam regardless of type of application (seed treatment, soil or foliar) on Cotton.” Use with an EPA-approved dye that imparts an unnatural color to the seed.

**CROP USE DIRECTIONS**

Crop	Target Diseases	Amount of active ingredient (azoxystrobin, fludioxonil, mefenoxam, difenoconazole combined) per seed*	Remarks
Cotton	Seed-borne and soil-borne fungi causing decay, damping-off and/or seedling blight.  Seedling damping-off ( <i>Rhizoctonia solani</i> , <i>Pythium</i> spp., <i>Fusarium</i> spp.)	0.023 mg	*mg per seed rates based on 5000 seeds per pound

\*1 fl. oz. of Quartet Cotton Seed Treatment Fungicide contains 1.70 grams azoxystrobin, 0.28 grams fludioxonil, 0.74 grams mefenoxam, and 0.11 grams difenoconazole.

**Application Based on a Weight Basis:**

Crop	Target Diseases	Use Rate fl. oz. product per 100 lbs seed*
Cotton	Seed-borne and soil-borne fungi causing decay, damping-off and/or seedling blight.  Seedling damping-off ( <i>Rhizoctonia solani</i> , <i>Pythium</i> spp., <i>Fusarium</i> spp.)	4.0

\*1 fl. oz. of Quartet Cotton Seed Treatment Fungicide contains 1.70 grams azoxystrobin, 0.28 grams fludioxonil, 0.74 grams mefenoxam, and 0.11 grams difenoconazole.

**Restrictions:**

- The maximum application rate for Cotton is not to exceed 0.00018 lbs ai/seed.
- Do not apply more than 0.01 lb ai /Acre/calendar year (4.7 g ai/Acre/calendar year) of mefenoxam as a seed treatment on Cotton.
- Do not apply more than 0.125 lb ai/Acre/calendar year (56.7 g ai/Acre/calendar year) of mefenoxam regardless of type of application (seed treatment, soil or foliar) on Cotton.

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## **STORAGE AND DISPOSAL**

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Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

### **Pesticide Storage**

Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

### **Pesticide Disposal**

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

### **Container Handling**

Non-refillable container. Do not reuse or refill this container. 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  $\frac{1}{4}$  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 by other procedures approved by state and local authorities.

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

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Quartet Cotton Seed Treatment Fungicide™, the ALLIANCE FRAME  
the SYNGENTA Logo and the PURPOSE ICON are trademarks of a Syngenta Group  
Company

Viton® trademark of E.I. du Pont de Nemours and Company

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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

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