



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

Rodney Ackers
Regulatory Manager
Arysta Life Science North America, LLC
15401 Weston Parkway, Suite 150
Cary, North Carolina 27513

NOV 1 8 2013

Subject:

CRY-048 Fungicide

EPA Registration No. 66330-409

Your resubmission amendment dated July 19, 2013

Decision No. 476352

Dear Mr. Ackers:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable. One copy of the label stamped "Accepted" is enclosed for your records. Submit one copy of the final printed label before the product is released for shipment. If you have any questions, please contact Tamue L. Gibson by phone at (703) 305-9096 or via email at gibson.tamue@epa.gov.

Sincerely,

Hope A Johnson

Product Manager, Team 21

Fungicide Branch

Registration Division (7504P)

**Enclosure** 

## ACCEPTED

NUV 1 8 2013

Under the Federal Insectioide, Fundade, and Rodemboide. Act, as amended, for the posticide registered under BPA Reg. No. (66330-469



### **CRY-048 Fungicide**

#### For Agricultural Uses

TOTAL: 100.0%

This product contains 1.40 pounds fluoxastrobin per gallon (167 g/L) and 1.82 pounds flutriafol per gallon (218 g/L)

#### KEEP OUT OF REACH OF CHILDREN

#### CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label find someone to explain it to you in detail.)

See additional precautionary statements and First Aid Instructions elsewhere on this label

For Product Use Information Call 1-866-761-9397

Produced for:

Arysta LifeScience North America, LLC 15401 Weston Parkway, Suite 150 Carv. NC 27513 EPA Reg No. 66330-409 EPA EST. No.

**NET CONTENTS:** 

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	FIRST AID
IF SWALLOWED:	<ul> <li>Call a poison control center or doctor for treatment advice.</li> <li>Have a 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 to an unconscious person.</li> </ul>
IF INHALED	<ul> <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>
IF ON SKIN OR CLOTHING	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin with plenty of water for 15–20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
IF IN EYES:	<ul> <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.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product going for treatme	container or label with you when calling a poison control center or doctor or int.
	FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE: Call PROSAR at 1-866-303-6952 or 1-651-632-8946 if calling from outside of the U.S.

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION**. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, shoes plus socks, and chemical resistant gloves made of any waterproof material, such as nitrile, butyl, neoprene and/or barrier laminate. These are only some of the glove materials that are chemically resistant to this product. For more options, refer to category A on an EPA chemical resistance category selection chart.

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

#### ENGINEERING CONTROLS STATEMENT

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**

This pesticide is toxic to mammals, fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. The active ingredient in this product can be persistent for several months or longer. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark, or other sensitive areas that may be exposed to spray drift. Do not contaminate water when disposing of equipment washwater or rinsate.

Ground Water Advisory: Flutriafol has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory: 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 is classified as having a high potential for reaching surface water via runoff for several months or more after application.

#### 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.

[language within brackets is optional text specific to state regulations]

#### 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), notification to workers, 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). The REI for each crop is located in the application directions for each crop.

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, shoes plus socks, and chemical resistant gloves made of any waterproof material.

#### - STORAGE AND DISPOSAL

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

#### **PESTICIDE STORAGE**

Store in original container and keep tightly closed. Store in a cool, dry, secure place.

#### PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

#### CONTAINER HANDLING

Nonrefillable 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 and drain for 10 seconds after the flow begins to drip. Fill the container 1/2 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

For help with any spill, leak, fire or exposure involving this material, call CHEMTREC day or night at 1-703-527-3887 or 1-800-424-9300.

#### PRODUCT INFORMATION

CRY-048 Fungicide is a broad-spectrum fungicide for the control of certain diseases in corn (field and hybrid seed) and soybean CRY-048 Fungicide works by interfering with respiration and sterol synthesis in plant-pathogenic fungi, and is a potent inhibitor of spore germination and mycelial growth. The active ingredients, fluoxastrobin and flutriafol move rapidly into green tissue via translaminar movement. CRY-048 Fungicide is rainfast 2 hours after application. Disease control will be reduced if rainfall occurs within 2 hours of application. The broad spectrum activity of CRY-048 Fungicide makes it an excellent choice as a broad spectrum, dual action fungicide for disease management programs for corn (field and hybrid seed) and soybean. Other labeled fungicides can be used in tank mixture or alternated with CRY-048 Fungicide to fulfill total disease management in corn (field and hybrid seed) and soybean.

#### **CROP ROTATION**

Crop Rotation: Crops treated with CRY-048 Fungicide may be rotated to a labeled crop at any time. Rotation to any other crop not listed on this label is prohibited.

#### **RESISTANCE MANAGEMENT**

The active ingredients in CRY-048 Fungicide (fluoxastrobin and flutriafol) belong to the strobilurin (Group 11 Fungicides) and the demethylation inhibitor (Group 03 Fungicides) fungicide classes, respectively. The dual action of CRY-048 Fungicide results in a built in resistance management strategy that will minimize the resistance in at risk pathogens. Fungal pathogens are known to develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, the use of this product should conform to resistance management strategies established for agricultural uses. Such strategies may include rotating and/or tank-mixing with products having different modes of action, or limiting the total number of applications per season. Arysta LifeScience and Cheminova Inc. encourage responsible resistance management to ensure effective long-term control of the fungal diseases on this label.

In programs in which CRY-048 Fungicide is used, the number of Group 11 fungicides (strobilurins) and Group 3 fungicides (demethylation inhibitors) applications should be no more than one half of the total number of fungicide applications per season for at risk pathogens.

Follow specific directions for individual crops that limit the total number of applications and required alternations with fungicides from other resistance management groups.

#### **APPLICATION GUIDELINES**

#### **Broadcast Ground Sprayers**

Thorough coverage is necessary to provide good disease control. Applications using sufficient water volume to provide thorough and uniform coverage generally provide the most effective disease control. For ground application equipment, 10 gallons/A minimum is required.

Equip sprayers with nozzles that provide accurate and uniform application. Be certain that nozzles are the same size and uniformly spaced across the boom. Calibrate the sprayer before use. Use a pump with the capacity to: (1) maintain a minimum of 35 psi at nozzles, and (2) provide sufficient agitation in the tank to keep the mixture in suspension (this requires recirculation of 10% of the tank volume per minute). Use jet agitators or a liquid sparge tube for

vigorous agitation. Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should be 16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh screens at the nozzles. Check nozzle manufacturer's recommendations. For information on spray equipment and calibration, consult sprayer manufacturer's and/or state recommendations. For specific local directions and spray schedules, consult the current state agricultural experiment station recommendations.

**Mixing Procedures** 

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. 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.

#### **CRY-048 Fungicide Alone**

Add 1/2 of the required amount of water to the mix tank. With the agitator running, add the CRY-048 Fungicide to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the CRY-048 Fungicide has completely and uniformly dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

CRY-048 Fungicide+ Tank-mix Partners

Add 1/2 of the required amount of water to the mix tank. Start the agitator running before adding any tank-mix partners. In general, tank-mix partners should be added in this order: products packaged in water-soluble packaging (see note below), wettable powders, wettable granules, (dry flowables), liquid flowables (such as CRY-048 Fungicide), liquids, and emulsifiable concentrates. Always allow each tank-mix partner to become fully and uniformly dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all of the mixture has been applied.

Note: When using CRY-048 Fungicide in tank-mixtures, all products in water-soluble packaging should be added to the tank before any other tank-mix partner. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank-mix partner to the tank.

If using CRY-048 Fungicide in a tank-mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations, which appear on the tank-mix product label. No label dosage rate may be exceeded, and the most restrictive label precautions and limitations must be followed. This product must not be mixed with any product that prohibits such mixing. Tank-mixtures or application of other products referenced on this label are permitted only in those states in which the referenced products are registered.

#### Compatibility

CRY-048 Fungicide is compatible with most insecticide, fungicide, herbicide and foliar nutrient products. However, the physical compatibility of CRY-048 Fungicide with tank-mix partners should be tested before use. To determine the physical compatibility of CRY-048 Fungicide with other products, use a jar test, as described below.

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.

The crop safety of all potential tank-mixes including additives and other pesticides on all crops has not been tested. Before applying any tank-mixture not specifically recommended on this label, confirm the safety of the tank mixture to the target crop. To test for crop safety, apply CRY-048 Fungicide to the target crop in a small area and in accordance with label instructions for the target crop.

#### AERIAL APPLICATION[\*]

#### Corn and Soybean

For aerial application a minimum of 5 gallons/A is required. 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. Aerial applications made to dense canopies may not provide sufficient coverage of lower leaves to provide proper disease control.

I\*Not approved for use in California.

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

#### SPRAY DRIFT

#### **SENSITIVE AREAS**

This pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitats for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulation.

- 1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Comply with all state regulations. The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

#### AERIAL DRIFT REDUCTION ADVISORY

This section is advisory in nature and does not supersede the mandatory label requirements.

#### INFORMATION ON DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications

are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions below).

#### CONTROLLING DROPLET SIZE

- Volume Use high-flow rate nozzles to apply the highest practical spray volume. Nozzles
  with higher rated flows produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### **BOOM LENGTH**

For some use patterns, reducing the effective boom length to less than % of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Applications must not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator should compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

#### **WIND**

Drift potential is lowest between wind speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential.

NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### **TEMPERATURE AND HUMIDITY**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### **TEMPERATURE INVERSIONS**

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light

variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing:

#### USE DIRECTIONS FOR SPECIFIC CROP

CRY-048 Fungicide provides control or suppression of several important diseases of corn (field and hybrid seed) and soybean.

#### CORN (Field and Hybrid Seed)

Rate to Use	Application Timing Directions
4 to 6 fl oz/A	Apply a maximum of two applications per season no later than growth stage R4 (early dough stage).
	For optimum results begin applications
	when disease first appears and continue as needed on a 7-10 day interval on field and
	seed com. Use high end of the use rate when disease pressure is high and conditions are favorable for disease
	development.
	<u>:</u>
	;

#### RESTRICTIONS AND OTHER INFORMATION:

- Do not apply more than 12 fl oz/A CRY-048 Fungicide per crop season.
- Do not apply more than 0.132 ai lb/A fluoxastrobin and 0.166 ai lb/A flutriafol per crop season.
- Do not make more than two applications per season.
- Allow at least 7 days between applications.
- CRY-048 Fungicide may be applied by ground or air.
- Do not apply this product through chemigation.
- Apply in a minimum of 10 gallons of water per acre by ground and 5 gallons of water per acre by air.
- Do not apply CRY-048 Fungicide within 80 days of harvest for Field or Hybrid Seed Corn: forage, stover and grain.
- Restricted Entry Interval (REI) for detasselling Hybrid Seed Corn and Field Corn is 5 days: the REI for all other activities is 12 hours.
- Do not use an adjuvant after the V8 stage and prior to the VT stage of corn. An adjuvant may be used at any other growth stage.

#### SOYBEAN

Diséase Control	Product Use Rate	Application Timing Directions							
Alternaria leaf spot (Alternaria spp) Anthrachose (Colletotrichum truncatum)	4 to 6 fl oz/A	•	Begin continue interval applicati growth's	Apply ons per	ded a sea	on a	14 imum	to 21 of	and day two than
Brown Spot (Septoria glycines)		•							
Cercospora blight, and Purple Seed Stain (Cercospora kikuchii)			·. ·						
Frogeye leaf spot (Cercospora sojina)	•						•		
Pod and Stem blight (Diaporthe phaseolorum)				r					
Powdery mildew (Micosphaera diffusa)								• •	
Rhizoctonia aerial blight (Rhizoctonia solani)	ing (no. 1905) and dispersion of the second	\$ \ ->::-						٠	
Rust (Phakopsora spp.)			e de la companya de l						
Sclerotinia stem rot (Sclerotinia sclerotiorum)		-		,					
Disease Suppresion White mold (Scierotinia rolfsii)									

#### RESTRICTIONS AND OTHER INFORMATION:

- Do not apply more than 12 fl oz/A CRY-048 Fungicide per crop season.
- Do not apply more than 0.132 ai lb/A fluoxastrobin and 0.166 ai lb/A flutriafol per crop season.
- Do not make more than two applications per season.
- The minimum retreatment interval is 14 days.
- CRY-048 Fungicide may be applied by air.
- Apply in a minimum of 10 gal of water per acre by ground and 5 gal of water per acre by air.
- Do not apply CRY-048 Fungicide within 21 days of forage harvest or 30 days of seed harvest.
- Restricted Entry Interval (REI) is 12 hours.
- Do not feed forage or hay to animals or permit animals to graze.

#### **Warranty and Disclaimer Statement**

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America, LLC ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. All such risks shall be assumed by the user or buyer.

Arysta 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 described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF ARYSTA IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN.

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CRY-048 Fungicide (PENDING) 07/12/13