UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

April 12, 2018

Connie Hickman
US Product Registration Manager
E.I. du Pont de Nemours and Company
DuPont Crop Protection
Chestnut Run Plaza (720/2E5)
974 Centre Road
Wilmington, DE 19805

Subject: PRIA Label Amendment – New Use on Enlist Corn
Product Names: DuPont Quizalofop P-Ethyl Technical Herbicide
DuPont Assure II Herbicide
EPA Registration Numbers: 352-541 & 352-542
Application Date: December 28, 2010
Decision Number: 443799 & 443800

Dear Ms. Hickman:

The application referred to above, submitted under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable under FIFRA section 3(c)(5) with the following terms and conditions:

1. You must submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

2. The new use of quizalofop-P-ethyl on field corn containing the herbicide-tolerant Enlist trait will **automatically expire 5 years from the date of this registration letter**, unless the Agency amends this condition otherwise.

3. You must develop and follow an Herbicide Resistance Management Plan as described in Appendix A.

4. You must submit annual reports to the Agency by January 15th of each year beginning in 2019, as outlined in Appendix A Section D, "Reporting Component," until the Agency amends this condition otherwise.

A stamped copy of the labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it

bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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 FIFRA 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.

Your release for shipment of the product 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.

If you have any questions, please contact Mindy Ondish by phone at 703-605-0723, or via email at ondish.mindy@epa.gov.

Sincerely,

Dan Kenny, Chief
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Enclosure

Appendix A – Herbicide Resistance Management Plan and Reporting Requirements for Use of Quizalofop-P-ethyl on Enlist Corn

# APPENDIX A

## Herbicide Resistance Management Plan and Reporting Requirements for Use of Quizalofop-P-ethyl on Enlist Corn

E.I du Pont de Nemours and Company/DuPont Crop Protection ("DuPont") must comply with the following:

*A. Educational Component*

1. Develop and implement an education program for users of this product that identifies appropriate best management practices (BMPs) to avoid and control weed resistance, and convey to users the importance of following BMPs.

   The following are examples of BMPs:

   Crop selection and cultural practices
   - Understand the biology of the weeds present.
   - Use a diversified approach towards weed management focused on preventing weed-seed production and reducing the number of weed seeds in the soil seed-bank.
   - Emphasize cultural practices that suppress weeds by using crop competitiveness.
   - Plant into weed-free fields, keep fields as weed-free as possible, and note areas where weeds were a problem in prior seasons.
   - Incorporate additional weed-control practices whenever possible, such as mechanical cultivation, biological management practices, crop rotation, and weed-free crop seeds, as part of an integrated weed-control program.
   - Do not allow weed escapes to produce seeds, roots, or tubers.
   - Manage weed seed at harvest and post-harvest to prevent a buildup of the weed seed-bank.
   - Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
   - Thoroughly clean plant residues from equipment before leaving fields.
   - Prevent an influx of weeds into the field by managing field borders.
   - Fields should be scouted before application to ensure herbicide and application rates will be appropriate for the weed species and weed sizes present.
   - Fields should be scouted after application to confirm herbicide effectiveness and to detect weed escapes.
   - If resistance is suspected, treat weed escapes with a different mechanism-of-action herbicide or use non-chemical methods to remove weed escapes.

   Herbicide selection
   - Use a broad spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed control program.

- A broad-spectrum weed-control program should consider all of the weeds present in the field. Weeds should be identified through scouting and field history.
- Difficult-to-control weeds may require sequential applications of herbicides with alternative mechanisms of action.
- Fields with difficult-to-control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action.
- Apply full rates of this herbicide for the most difficult to control weeds in the field. Applications should be made when weeds are at the correct size to minimize weed escapes.
- Do not use more than two applications of this herbicide or any herbicide with the same mechanism of action within a single growing season unless mixed with another mechanism of action herbicide with overlapping spectrum for the difficult to control weeds.
- Report any incidence of non-performance of this product against a particular weed species to DuPont or its representatives.

2. Include at least one written communication to users of this product each year regarding herbicide-resistance management.

3. Provide a copy of the education materials to EPA upon request.

*B. <u>Field Detection and Remediation Components</u>*

1. If any user informs DuPont or its representatives of a lack of herbicide efficacy in a weed species listed on product labeling, then DuPont or its representatives must make an effort to evaluate the field for suspected resistance to this product by applying the criteria below, as set forth in Norsworthy, *et al*., "Reducing the Risks of Herbicide Resistance: Best Management Practices and Recommendations" Weed Science 2012 Special Issue: 31-62;

   *<u>Criteria for Determining Suspected Herbicide Resistance</u>*
   *1) Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; and/or*
   *2) A spreading patch of non-controlled plants of a particular weed species; and/or*
   *3) Surviving plants mixed with controlled individuals of the same species.*

2. If one or more of the above criteria are met, then:

   a. Provide the user with specific information and recommendations to control and contain suspect weeds, including re-treatment and/or other non-chemical controls, as appropriate. If requested by the user, DuPont will become actively involved in implementation of weed control measures.

   b. Request, at the time of the initial determination that one or more of the above criteria are met and prior to any application of alternative control practices, that the user

provide access to the relevant field(s) to collect specimens of the suspect weeds (potted specimens or seeds) for potential further evaluation in the greenhouse or laboratory, and to collect such specimens if possible (or, alternatively, request that the user provide such specimens to DuPont at DuPont's expense).

c. Conduct greenhouse or laboratory studies to confirm resistance as soon as practicable following sample collection, if technically feasible.

d. To the extent possible, contact or visit the user in an appropriate timeframe after implementation of the additional weed control measures in order to evaluate success of such measures.

e. If the additional weed control measures were not successful in controlling the suspected-resistant weeds, then:

i. Work with the user to determine the reason(s) why the additional control measures were unsuccessful;

ii. Offer to provide technical expertise on how to control and contain the suspected-resistant weeds, including re-treatment and/or other non-chemical controls, as appropriate; and

iii. Report annually the inability to control the suspected-resistant weeds to relevant stakeholders.

3. Keep records of all field evaluations for suspected resistance for a minimum of three years, and provide a copy to EPA upon request.

*C. <u>Evaluation Component</u>*

1. Conduct annual surveys to determine whether users have encountered any perceived issues with non-performance or lack of efficacy of this product, and if so, how users have responded. This survey must be based on a statistically-representative sample of users. The sample size and geographical resolution should be adequate to allow analysis of responses within regions, between regions, and across the United States.

2. Analyze the survey results each year, and modify the following for the upcoming growing season, as appropriate:

a. Efforts aimed at achieving compliance with BMPs;

b. Responses to incidents of suspected weed resistance and confirmed weed resistance; and

c. The education program. At the initiative of either EPA or DuPont, both parties shall consult about possible modifications to the education program.

*D. Reporting Component*

1. Submit reports to EPA by January 15th of each year, beginning in 2019, with information on:

   a. Annual sales of this product by state;

   b. Annual sales of corn seed containing Enlist trait by state;

   c. The current education program. The first report shall include the current education program and its associated materials. Subsequent annual reports shall include updates of any aspect of the education program and associated materials that have materially changed since submission of the previous annual report;

   d. Summary of efforts aimed at achieving compliance with the BMPs;

   e. Investigation and remediation of cases on suspected-resistant weeds. Summary of determinations as to whether any reported lack of herbicide efficacy was due to suspected-resistance, any follow-up actions taken, and if available, the final outcome (e.g., evaluation of success of additional weed control measures) regarding each case of suspected-resistance. The annual report shall list the cases by county and state;

   f. Summary of the status of any laboratory and greenhouse testing performed by or at the direction of DuPont, in response to cases of suspected-resistance, performed in the previous year. Data pertaining to such testing need not be included in the annual reports, but such data must be made available to EPA upon request; and

   g. The annual survey, including whether users are implementing herbicide resistance BMPs, and a summary of DuPont's annual review and any modifications based on the survey results.

Following submission of the annual report, DuPont shall meet with EPA at EPA's request to evaluate and consider the information contained in the report.

# DuPont™ Quizalofop P-Ethyl Technical herbicide

**FOR FORMULATION USE ONLY**

ACCEPTED
04/12/2018
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 352-542

**ACTIVE INGREDIENT:** Quizalofop P-ethyl
Ethyl(R)-2-[4-(6-chloroquinoxalin-2-yl oxy)-phenoxy]propionate ..... **97.8%**
**OTHER INGREDIENTS** ..... **2.2%**
**Total 100.0%**

EPA Reg. No. 352-542 EPA Est. No. _____

## KEEP OUT OF REACH OF CHILDREN

# CAUTION

## FIRST AID

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

## PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION! Causes moderate eye irritation. Avoid contact with eyes or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

## ENVIRONMENTAL HAZARDS

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

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Only for formulation into an end use herbicide for:

1. The following uses:
   Terrestrial Food/Feed Crops—Beans (Dry and Succulent), Cotton, Field corn (Enlist™ quizalofop-P-ethyl-resistant trait), Grain sorghum (Inzen™ quizalofop-P-ethyl-resistant trait), Lentils, Mint (Spearmint and Peppermint), Peas (Dry and Succulent), Pineapple, Rapeseeds (Borage, Canola, Crambe, Cuphea, Echium, Flax seed, Gold of pleasure [Camelina], Hare's ear mustard, Lesquerella, Lunaria, Meadowfoam, Milkweed, Mustard seed, Oil radish, Poppy seed, Sesame, and Sweet rocket), Soybeans, Sugarbeets, and Sunflowers.
   Terrestrial Non-Food/Non-Feed Crops – Alfalfa, Onion, Carrot, Garlic, Swiss chard, Spinach, Radish, Chinese cabbage, and Red beets grown specifically under contract as non-food/nonfeed crops for seed production only; Eucalyptus; Hybrid poplar plantings; Perennial ryegrass (quizalofop-P-ethyl-resistant trait) grown for seed production only; and Field Corn (Enlist™ quizalofop-P-ethyl-resistant trait) grown for seed production only.
   Terrestrial Non-Crop Areas
2. Uses for which USEPA has accepted the required data and/or citations of data that the formulator has submitted in support of registration.
3. Uses for experimental purposes that are in compliance with USEPA requirements.

Formulators using this product are responsible for obtaining EPA registration of their formulated product.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE**: Store product in original container only. Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING:** Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

**Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):** 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. Fill the container 1/4 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. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities

**Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds):** 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. Fill the container 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, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities

**Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down):** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners:** Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

## STORAGE AND DISPOSAL
**(continued)**

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). *Refilling Fiber Drum:* Refill this fiber drum with DuPont™ Quizalofop P-Ethyl Technical herbicide containing quizalofop P-ethyl only. Do not reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. *Disposing of Fiber Drum and/or Liner:* Do not reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**All Other Refillable Containers:** Refillable container. *Refilling Container:* Refill this container with Quizalofop P-Ethyl Technical herbicide containing quizalofop P-ethyl only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use the container, contact DuPont at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact DuPont at the number below for instructions. *Disposing of Container:* Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Outer Foil Pouches of Water Soluble Packets (WSP):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or, dispose of the empty outer foil pouch in the trash as long as WSP is unbroken. If the outer pouch contacts the formulated product in any way, the pouch must be triple rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer pouch as described previously.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont at 1-800-441-3637, day or night.

## LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read this 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. DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the directions under normal conditions.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, DUPONT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BUYER'S OR USER'S BARGAINED-FOR EXPECTATION IS CROP PROTECTION. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, TORT OR STRICT LIABILITY), WHETHER FROM FAILURE TO PERFORM OR INJURY TO CROPS OR OTHER PLANTS, AND 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 DUPONT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

To the extent consistent with applicable law that allows such requirement, buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise, or be barred from any remedy.

This Limitation of Warranty and Liability may not be amended by any oral or written agreement.

**Nonrefillable Container**
Net: _____

*OR*

**Refillable Container**
Net: _____

Produced for:

E. I. du Pont de Nemours and Company

974 Centre Road

Wilmington, Delaware 19805 U.S.A.

Made in China

TD-257 03082018