



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

January 11, 2022

Tammie Jones-Jefferson  
Leader, U.S. Crop Protection Regulatory Affairs  
Corteva Agriscience, LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

Subject: Registration Amendment – Extension of Time-Limited Registration with Amended Terms and Conditions, Revised Labeling and Supplemental Labeling  
Product Name: GF-3335 (alternate brand name: Enlist One)  
EPA Registration Number: 62719-695  
Application Date: April 5, 2021  
Decision Number: 573217

Dear Ms. Jones-Jefferson:

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable, provided Corteva Agriscience, LLC (“Corteva”) complies with all terms and conditions listed below.

This amendment extends the product registration’s expiration date from 1/12/2022 to **1/11/2029 with amended terms and conditions**. This registration will automatically expire on 1/11/2029 unless amended by EPA.

Corteva must comply with all the following terms and conditions:

*Endangered Species Protection and Formal Consultation*

1. In its endangered species assessment as part of its review of this action, EPA made may affect determinations for certain listed species and their designated critical habitats. EPA initiated formal consultation with the United States Fish and Wildlife Service (FWS), which will be ongoing during the renewed registration period.

If, after formal consultation with FWS, additional modifications are identified in the Service’s Biological Opinion, EPA will notify Corteva in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA’s notice, Corteva must submit an amendment application incorporating any required changes, including amended labels. Alternatively, Corteva may respond by submitting a request for voluntary cancellation of this product. If Corteva fails to comply with this term, Corteva has agreed in prior written acceptance of these terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

*Immediate Use of Revised Labeling and Supplemental Labeling*

2. After 1/11/2022, all production of new product must bear the revised label.
3. Corteva released for shipment products with previously approved labeling for use during the 2022 growing season with a registration that was set to expire January 12, 2022. Product labeling approved prior to 1/11/2022 is now superseded by the revised labeling except for product being returned to Corteva or disposed of as described in paragraph 3.d. Therefore, to ensure that products are not misbranded or misused, and appropriate labeling is in the possession of users for the 2022 growing season, the following terms and conditions are required.
  - a. Any sale or distribution of this product that is not labeled with the revised label or is not accompanied by the supplemental label described below will be considered a violation of FIFRA and may be subject to EPA enforcement. Some of these enforcement measures may include, but are not limited to, the issuance of Stop Sale, Use or Removal Orders (SSUROs) and/or the assessment of penalties.
  - b. Along with the new labeling approved herein, EPA has approved supplemental labeling that supersedes the labeling on all products sold on or prior to 1/11/2022.
  - c. To ensure that EPA can track the relabeling and distribution of the supplemental labeling, after 1/11/2022, for all products that were released for shipment and are in the channels of trade prior to 1/11/2022, Corteva must make the supplemental label available as described below.
    - i. By 1/25/2022, copies of the revised Section 3 label and supplemental label must be announced and posted in a prominent location on all Corteva websites that advertise or provide information about this product, including, Enlist main page ([www.enlist.com](http://www.enlist.com)), Enlist Herbicides page ([www.enlist.com/en/herbicides.html](http://www.enlist.com/en/herbicides.html)), Enlist One Herbicide page ([www.enlist.com/en/herbicides/enlist-one.html](http://www.enlist.com/en/herbicides/enlist-one.html)), and Enlist Ahead page ([www.enlist.com/en/enlist-ahead.html](http://www.enlist.com/en/enlist-ahead.html)), and retained until the expiration date of this registration unless superseded by subsequent approved labeling.
    - ii. By 1/25/2022, a banner containing the following must be prominently displayed at the top of all Corteva websites that advertise or provide information about this product, including the URLs listed above.
      1. **“ATTENTION: ENLIST ONE MUST HAVE THIS NEW LABELING TO BE LAWFULLY APPLIED, DISTRIBUTED, OR SOLD AFTER 1/11/2022.”**
      2. A copy or link to a copy of the supplemental labeling with approval date.

3. After 1/11/2022, Corteva has provided supplemental labeling for this product and users are under legal obligation to follow the supplemental labeling or the revised Section 3 labeling.
  4. After 1/11/2022, all sellers and distributors of this product must ensure either the supplemental labeling accompanies products sold or distributed, or that the products are labeled with the revised Section 3 labeling.
  5. It is a violation of FIFRA Section 12 to use a registered pesticide in a manner inconsistent with its labeling.
  6. It is a violation of FIFRA Section 12 to sell or distribute a misbranded pesticide.
  7. Civil penalties may be assessed in an amount up to \$20,528 for each unlawful sale or distribution under FIFRA.
- iii. As soon as possible, but no later than 2/28/2022, Corteva must notify and send a copy of the supplemental labeling to all sellers, distributors, and purchasers of this product from 1/1/2017 through 1/11/2022, except for those described in paragraph d, either electronically to a valid and appropriate e-mail address, or via mail, or both. With the labeling, Corteva must also provide all of the information specified above for the banner-linked web page. A sample of this correspondence must be sent to EPA by 1/28/2022. Corteva must maintain copies of each correspondence it sends to all sellers, distributors, and purchasers for a minimum of 5 years and provide copies to EPA, if requested, within 10 business days.
- iv. Corteva must maintain a record of when, to whom, and method of mailing of this correspondence. Corteva must track the receipt of this correspondence via return receipts or requesting confirmation of receipt. Corteva must submit this record to EPA by 3/14/2022.
- d. As of 1/11/2022, this product cannot be used in certain geographic areas identified by the supplemental labeling. Corteva must inform all sellers, distributors, and purchasers in those geographic areas by 2/28/2022 that it is a misuse and a violation under federal law to apply this product in these prohibited areas. Corteva must coordinate with these parties to return or properly dispose of this product. If returned, Corteva must relabel before any further distribution with either the new labeling or the supplemental labeling. Such relabeling of products must be completed in an EPA-registered establishment. Corteva must send a report to EPA by 3/14/2022 detailing its efforts to accomplish all of the above. Corteva must maintain copies of any correspondence it sends to all sellers, distributors, and purchasers in these areas and make them available to EPA upon request.
- e. Corteva must communicate the availability and requirement for purchasers to follow the supplemental labeling when using products that were sold or distributed prior to 1/11/2022 in the Enlist education and training program required in paragraph 10.e,

including in written educational communications. Materials must emphasize that:

- i. Users must have a copy of the supplemental labeling. The supplemental labeling supersedes the labeling on all products sold on or prior to 1/11/2022.
- ii. After 1/11/2022, users of this product are under legal obligation to follow the supplemental labeling or it will be considered a misuse under federal law.

*Pollinator Protection Stewardship Plan*

4. Corteva must develop, implement, maintain, and annually update a pollinator protection stewardship plan. The purpose of this plan is to address potential impacts from this product's use to insect pollinators, including bees and butterflies. This plan must include the following components:
  - a. Education, training, and outreach for product users as described in 10.d. Corteva must develop educational materials that describe the importance of pollinator protection in agriculture and best management practices to reduce potential pesticide exposure to pollinators including, but not exclusive, to monarch butterflies. Materials must also describe label provisions intended to minimize the potential for product exposure to pollinators, including updated environmental hazard and non-target organism advisory statements, and new application timing restrictions.
  - b. Conservation activities that result in meaningful restoration of habitat used by monarch butterflies and other insect pollinators to address potential impacts from this product's use, taking into account species' range and habitat requirements.
5. Corteva must provide EPA with annual progress reports on the implementation of the above components by July 15<sup>th</sup> of each year.
6. Corteva must provide a copy of the pollinator protection stewardship plan to EPA by 7/15/2022, and at any subsequent time upon EPA's request. Following submission of the stewardship plan, Corteva shall meet with EPA at EPA's request to evaluate and consider the information contained in the plan, and make changes as needed.

*Herbicide Resistance Management Plan*

7. Corteva must continue to implement, maintain, and annually update an herbicide resistance management plan as described in Appendix D regarding grower agreements; field detection and remediation; education, training, and outreach; annual survey and evaluation; and annual reporting.

*Spray Drift Testing of Tank Mix Products*

8. Corteva must continue to maintain a website at [www.enlist.com/tankmix](http://www.enlist.com/tankmix). This website must include a list of products that have been tested pursuant to Appendix A and found, based upon such testing, that the tank mix will not result in drift that is statistically greater than the mean estimate for the combination of Enlist Duo reference formulation and nozzle. The website must state that any requestor seeking to have a product added to the list must perform a study either pursuant to the testing protocol identified on the website that is consistent with Appendix A, or another protocol that has been approved for such purpose by EPA, and must submit the test data and results to Corteva, along with a certification that the study was performed either pursuant to the testing protocol identified on the website or pursuant to another protocol approved by EPA, and that the test results support adding the product to the list of products tested and found not to adversely affect the spray drift properties of this product. Corteva will determine whether the testing and results conform to the conditions prescribed in the protocol. Corteva must review and respond to all third-party requests within 90 days of receipt by either adding the product to the list of approved tank mix partners on the Enlist website or notifying the requestor that the product did not meet the requirements for inclusion. Testing of products tank mixed with this product must be conducted in compliance with procedures described in Appendix A.
9. Corteva must retain records of all spray drift test data generated by Corteva, someone working for Corteva, or submitted to Corteva by a third-party along with a certification indicating whether the study was performed either pursuant to the testing protocol identified on the website or pursuant to another protocol approved by EPA, and whether the test results support adding the product to the list of products tested and found not to adversely affect the spray drift properties of this product. All such records must be submitted to EPA upon request within 10 business days.

*Education, Training, and Outreach*

10. Corteva must develop, implement, and annually update an education and training program, with at least one written communication each year, to growers of Enlist crops and users of this product that includes information on:
  - a. Product use restrictions and mitigation measures to protect listed species and their designated critical habitats, including geographical use limitations; consulting with the Endangered Species Protection Bulletin (Bulletins Live! Two) within 6 months prior to application; spray drift, nozzle selection, and tank mix restrictions; 48-hr rainfall and irrigation restrictions; runoff mitigation measures including selection of practices and determination of soil types; and reporting ecological incidents to Corteva.
  - b. Tank mix restrictions and spray drift testing requirements. Educational and training materials must emphasize the prohibition of using other pesticides and adjuvants in a tank mixture with this product, and that only approved products that have undergone

- spray drift testing (as described in Appendix A) and are listed as approved tank mix products for use with this product at [www.enlist.com/tankmix](http://www.enlist.com/tankmix) can be used.
- c. Herbicide resistance management as described in Appendix D, Section B.
  - d. The importance of pollinator protection in agriculture and best management practices to reduce potential pesticide exposure to pollinators including, but not exclusive, to monarch butterflies. Materials must also describe label provisions intended to minimize the potential for exposure to pollinators, including updated environmental hazard and non-target organism advisory statements, and new application timing restrictions.
  - e. Corteva must communicate the availability and requirement to use the supplemental labeling as described in paragraph 3.e.
11. Corteva must ensure annually, including the 2022 use season, that growers of Enlist crops and Enlist product users receive training and educational materials that convey the current information on the Enlist program as described in this amendment letter, and have copies of the current approved labeling.
  12. Corteva must provide a copy of all Enlist educational and training materials, and examples of written communication materials to EPA by 2/28/2022, and at any time upon EPA's request. At the initiative of either EPA or Corteva, EPA and Corteva will meet to discuss possible modifications to the educational program as needed.
  13. Corteva must provide access to educational materials for distribution by sales representatives or others to growers, users, extension agents, neighboring landowners, and any other interested stakeholders by February 1<sup>st</sup> of each year.
  14. The educational and training materials must be made available to state pesticide authorities and state agricultural extension services upon request.

#### Annual Survey and Evaluation

15. Corteva must conduct annual surveys of growers of Enlist crops and Enlist product users and provide results to EPA by January 15<sup>th</sup> of each year. These surveys must be based on a statistically representative sample of growers and users. The sample size and geographical resolution should be adequate to allow analysis of responses within regions, between regions, and across the United States. These surveys must evaluate, at a minimum, the following:
  - a. Planning and adoption of runoff mitigation measures, including, which practices were already in place prior to deciding to use this product; which practices were newly selected in order to use this product; and which practices are planned for future use of this product.

- b. Information from herbicide resistance management plan as described in Appendix D, Section D.

Annual Reporting

16. Corteva must submit annual reports to EPA containing the following:

- a. By January 15<sup>th</sup>, results from the annual survey on planning and adoption of runoff mitigation measures.
- b. By January 15<sup>th</sup>, information from herbicide resistance management plan as described in Appendix D, Section D.
- c. By July 15<sup>th</sup>, implementation of the pollinator protection stewardship plan, including activities on pollinator conservation and habitat restoration, and education, training, and outreach.

17. Subsequent annual reports after the first year shall include updates of any aspect of the education and training program and associated materials that have materially changed since submission of the previous annual report.

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

References to the company's website on the label becomes labeling under FIFRA and therefore the website 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 the 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 EPA's 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 stamped copy of the labeling is enclosed. This labeling supersedes all previously accepted labeling. Corteva must submit one copy of the final printed labeling for the record before releasing this product for shipment with the revised labeling.

In addition to Corteva's prior written acceptance of these terms, release of this product for shipment further confirms Corteva's acceptance of all terms and conditions listed above. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6, including cancellation under FIFRA 6(e) as described under paragraph 1.

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Please contact Curtis Hildebrandt at 202-566-2770 or at [hildebrandt.curtis@epa.gov](mailto:hildebrandt.curtis@epa.gov) for any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Lindsay Roe". The signature is fluid and cursive, with a large initial "L" and a stylized "R".

Lindsay Roe  
Chief, Herbicide Branch  
Registration Division

#### Enclosures

Appendix A – Testing of Tank Mix Products  
Appendix B – Validation Criteria  
Appendix C – AGDISP Input Parameters  
Appendix D – Herbicide Resistance Management Plan  
Approved GF-3335 (Enlist One) Product Label  
Approved GF-3335 (Enlist One) Supplemental Label

## **APPENDIX A**

### **Testing of Tank Mix Products**

Products proposed for tank-mixing with this product may be added to the list of products that will not adversely affect the spray drift properties of this product, located at [www.enlist.com/tankmix](http://www.enlist.com/tankmix), if a study is performed under the testing conditions set forth below; the test information is reported as set forth below; and the results are interpreted as set forth below and the interpretation supports adding the tested product to the list of products that will not adversely affect the spray drift properties of this product.

The purpose of this study is to show that spray drift deposition 30 feet downwind from the proposed tank mix (that includes this product) does not exceed that of a reference formulation (Enlist Duo). Deposition from the reference formulation, as measured in a field study, did not result in exposures 30 or more feet downwind from application that would trigger risk concerns.

Using application conditions similar in the field study with Enlist Duo, Agricultural DISPersal (AGDISP) model deposition estimates for Enlist Duo can be generated and serve as a surrogate for the results of the field study and as a basis of comparison of the effects of formulation on spray drift. Therefore, AGDISP estimates for proposed tank mixtures that include this product can be compared with the estimates made by the AGDISP model for the reference formulation (Enlist Duo) to determine if pesticide deposition estimates at the 30-foot downwind distance are comparable and therefore also comparable to the field test generated pesticide deposition establishing the threshold point for no risk concerns.

To accomplish these comparisons, the effects of formulation and tank mixture on spray droplet spectra must be determined because this is an important input to the AGDISP model. Furthermore, to control for differences in instrument calibration and local environmental conditions that could confound any comparisons, testing from spray droplet spectra for a proposed tank mixture with this product must also be accompanied by a determination of the droplet spectrum for the reference formulation (Enlist Duo).

The following sections describe the approach for determining droplet spectra for the various test articles based on spray chamber or wind tunnel tests. In addition, the description of approach for conducting AGDISP spray drift model estimation and the comparison of the results is included.

#### Testing Conditions

Spray chamber test using conditions described in ASTM E-2798-11; or a wind tunnel test using conditions described in *EPA Final Generic Verification Protocol for Testing Pesticide Application Spray Drift Reduction Technologies for Row and Field Crops*<sup>1</sup> (June 2016).

Testing Media:           1) Enlist Duo and 2) Enlist One (this product) + Proposed Tank Mix Product  
Test Nozzle:            AIXR 11004 at 40 psi  
Number of Replicates: 3 for each tested medium

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<sup>1</sup> <https://www.epa.gov/reducing-pesticide-drift/generic-verification-protocol-testing-pesticide-application-spray-drift>

### Reporting

1. Report the validation information as summarized in Appendix B.
2. Report the full droplet spectrum for each replicate of each tested medium.
3. Perform AGDISP (v8.26) modeling run for each replicate droplet spectrum for each tested medium (AGDISP input parameters described in Appendix C).
  - a. Establish the 30-foot downwind spray drift deposition estimate from the AGDISP run on each replicate for each tested medium.
  - b. Establish the mean and standard deviation of the 30-foot downwind spray drift deposition estimates from the AGDISP run for the 3 replicates of each tested medium.
  - c. Perform a one-tailed (upper bound) t-test ( $p=0.1$ ) to determine if the mean AGDISP spray drift deposition estimate at 30 feet downwind for the proposed tank mix product with this product is significantly greater than the mean estimate for the Enlist Duo reference formulation.

### Interpretation of Results

If the mean 30-foot downwind spray drift deposition estimate for the proposed tank mix product with this product is not statistically greater than the mean estimate for the Enlist Duo reference formulation, then the proposed tank mix product can be added to the list of products that will not adversely affect the spray drift properties of this product, located at [www.enlist.com/tankmix](http://www.enlist.com/tankmix).

If the mean 30-foot downwind spray drift deposition estimate for the proposed tank mix product with this product is statistically greater than the mean estimate for the Enlist Duo reference formulation, then the proposed tank mix product cannot be added to the list of products that will not adversely affect the spray drift properties of this product, located at [www.enlist.com/tankmix](http://www.enlist.com/tankmix).

Results from other testing protocols will be acceptable for adding tank mix products to the list of products that will not adversely affect the spray drift properties of this product, located at [www.enlist.com/tankmix](http://www.enlist.com/tankmix), provided that EPA has determined in writing that such other protocol is appropriate for such purpose.

**APPENDIX B**  
**Validation Criteria**

1. Detailed information of instrument setting and measurements, including:
  - a. The distance from the nozzle tips to the laser settings.
  - b. Measurements of airspeed and liquid flow rate.
2. Detailed information of test substances, including:
  - a. Volume composition and density of proposed tank mix product with this product.
  - b. Volume composition and density of Enlist Duo reference formulation.
3. Summary of the entire spray output distribution for each combination of nozzle and tank mixture, with statistical analysis of replicates.
4. Graphical outputs of Sympatec HELOS laser diffraction particle size analyzer for individual spectrum report of  $D_{v0.1}$  (SD),  $D_{v0.5}$  (SD), and  $D_{v0.9}$  (SD) as well as mean % fines of  $\leq 141\ \mu\text{m}$  (SD) fractions.

**APPENDIX C**  
**AGDISP Input Parameters**

AGDISP (v8.26) is run for each replicate droplet spectrum for each medium tested in a spray chamber or wind tunnel test. Model inputs should be specific to the spray material of each medium and to the meteorological conditions of the spray chamber or wind tunnel test. Example inputs follow below for a test of the Enlist Duo reference formulation.

PARAMETER	VALUE	COMMENTS
Application Method Section		
Method	Ground	
Nozzle Type	Flat fan (Default)	The direct use of the DSD overrides the use of "nozzle type."
Boom Pressure	40 psi	If nozzle and tank mix or a combination of nozzle and tank mix were tested, the resulting spray quality has to be consistent with the spray quality generated with Enlist Duo using TeeJet® AIXR 11004 nozzle at 40 psi.
Release Height	3 ft	Default
Spray Lines	20	Default
Meteorology Section		
Wind Type	Single height	Default
Wind Speed	15 mph	Upper bound from label
Wind Direction	-90 deg	Worst-case and default
Temperature	65 F	Default
Relative Humidity	50%	Default
Surface Section		
Angles	0	Default
Canopy	None	Default
Surface Roughness	0.12 ft	Mean of "crops" cover type
Application Technique Section		
Nozzles	54, even spacing	Standard boom setup
DSD	From wind tunnel results, imported in library	
Atmospheric Stability	Strong	Default
Swath Section		
Swath Width	90 ft	Standard boom
Swath Displacement	0 ft	Worst-case
Spray Material Section		
Spray Volume Rate	15 gal/A	From Enlist Duo label
Volatile/Nonvolatile Fraction	Enlist Duo at 2.8% v/v	To calculate volatile/nonvolatile fraction in the tank mix for the model input, provide detailed information of the tested formulations and tank

		mixes. See sample calculation below used in WT study (MRID 49384801) <sup>1</sup>
<p><sup>1</sup>The tested mixture was 2.8% (v/v) Enlist Duo in water. Enlist Duo has a density of 1.171 kg/L and contains 24.42 % (w/w) of 2,4-D choline salt (16.65% (w/w) 2,4-D acid equivalent) and 22.17% (w/w) glyphosate dimethylammonium salt.</p> <p>For example, a 100-liter batch would contain the following: Enlist Duo 2.8% * 100 L = 2.8L; 2.8L * 1.171 kg/L = 3.279 kg Water: 100 - 2.8 L = 97.2 L = 97.2 kg Total weight: 3.279 + 97.2 = 100.497 kg Active ingredient fraction: 3.279 kg * 16.65% (a.e.) = 0.546 kg; 0.546 kg/100.497 kg = <b>0.0054</b> (dimensionless) Non-volatile fraction: 3.279 kg * (24.42% + 22.17%) = 1.528 kg; 1.528 kg/100.497 kg = <b>0.0152</b> (dimensionless)</p>		

## APPENDIX D Herbicide Resistance Management Plan

Corteva must develop and implement an herbicide resistance management plan that includes the following components:

### A. Grower Agreements, Field Detection and Remediation

1. Ensure that any person who purchases any Enlist seed sign a binding contract, or “grower agreement,” that is enforceable by Corteva. In the grower agreement, Corteva will reinforce with users the critical importance of following resistance management practices and appropriate best management practices (BMPs). This includes stressing the requirement for pre- and post-application field scouting and that lack of herbicide efficacy should be reported promptly to Corteva or its representative.
2. Retain copies of all executed grower agreements for a period of 3 years from the date of execution and provide copies to EPA upon request.
3. If any grower, crop consultant, extension agent, or state specialist informs Corteva or its representative of a lack of herbicide efficacy, then Corteva or its representative must work with growers to support them in identifying and responding to suspected resistance to 2,4-D by applying the criteria for determining suspected herbicide resistance listed below, set forth in *EPA Pesticide Registration Notice 2017-2: Guidance for Herbicide-Resistance Management, Labeling, Education, Training, and Stewardship*.<sup>2</sup> In addition, such testing of suspected resistance must also include testing with dicamba to evaluate the extent to which cross-resistance and/or multiple resistance is occurring.

#### Criteria for Determining Suspected Herbicide Resistance:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
  - A spreading patch of non-controlled plants of a particular weed species.
  - Surviving plants mixed with controlled individuals of the same species.
4. If one or more of the above criteria are met, then Corteva or its representative must:
    - a. Provide the grower with specific information and recommendations to control and contain suspected resistant weeds, including rotation to chemicals with different modes of action and/or other non-chemical controls, as appropriate. If requested by the grower, Corteva will become actively involved in implementation of weed control measures.

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<sup>2</sup> <https://www.epa.gov/pesticide-registration/prn-2017-2-guidance-herbicide-resistance-management-labeling-education>

- b. Request, at the time of the initial determination that one or more of the criteria are met and prior to any application of alternative control practices, that the grower provide Corteva with access to the relevant field(s) to collect specimens of the suspected resistant weeds (potted specimens or seeds) for further evaluation in the greenhouse or laboratory, and to collect such specimens if possible (or, alternatively, request that the grower provide such specimens to Corteva, at Corteva's expense).
  - c. Conduct greenhouse or laboratory studies to confirm resistance as soon as practicable following sample collection.
  - d. To the extent possible, contact or visit the grower 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 grower to determine the reason(s) why the additional control measures were not successful.
    - ii. Offer to further assist the grower in controlling and containing the suspected resistant weeds, including rotation to chemicals with different modes of action and/or other non-chemical controls, as appropriate.
    - iii. Report annually the inability to control the suspected resistant weeds to relevant stakeholders such as extension experts, state agencies, and grower organizations.
5. Keep records of all field evaluations for suspected resistance for a period of 3 years and provide a copy of the records to EPA upon request.

## **B. Education, Training, and Outreach**

1. Develop, implement, and annually update an education and training program, with at least one written communication each year, regarding herbicide resistance management to growers of Enlist crops and users of this product that is separate and apart from the grower agreement. All education and training materials must include information on:
  - a. The critical importance of following resistance management practices and appropriate BMPs as described in Section B.5. to prevent, contain, delay, and/or control weed resistance.
  - b. Stressing the requirement for field scouting before and after application.

- c. Corteva's commitments to growers on addressing suspected resistant weed investigations including field detection, testing, and remediation assistance as described in Sections A.4-5.
  - d. Reporting lack of herbicide efficacy promptly to Corteva or its representative.
2. Corteva must provide access to educational materials for distribution by sales representatives or others to growers, users, extension agents, neighboring landowners, and any other interested stakeholders by February 1<sup>st</sup> of each year.
  3. Corteva must provide a copy of the education program to EPA by 02/28/2022 and at any time upon EPA's request.
  4. The education and training materials must be made available to state pesticide authorities and state agricultural extension services.
  5. Appropriate best management practices (BMPs) must be included in the education program to avoid and control weed resistance and convey the importance of following BMPs. Corteva must advise growers to follow BMPs in all education and training materials, annual written communication, product literature, and grower agreement. This list may be updated or revised as new information becomes available.

The following BMPs must be included:

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.
- Scout fields before application to ensure herbicide and application rates will be appropriate for the weed species and weed sizes present.

- Scout fields 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 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 approved 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 Corteva or its representatives.

### **C. Annual Survey and Evaluation**

1. Conduct annual surveys of product users and growers of Enlist crops. These surveys must be based on a statistically representative sample of product users and growers of Enlist crops. The sample size and geographical resolution should be adequate to allow analysis of responses within regions, between regions, and across the United States. These surveys must evaluate, at a minimum, the following:
  - a. Whether growers have encountered any perceived issue with non-performance or lack of efficacy of this product and, if so, how growers have responded.
  - b. How this product is used, including use site/crop, application timing, whether it was tank mixed with other herbicide(s) and, if so, identify the active ingredient(s) used in the tank mixture.
2. Utilize the results from the survey described in paragraph 1 of this section to annually review, and modify as appropriate for the upcoming growing season, the following:
  - a. Efforts aimed at achieving compliance with the grower agreement.
  - b. Responses to incidents of suspected resistance and confirmed resistance.

- c. The education program. At the initiative of either EPA or Corteva, EPA and Corteva shall consult about possible modifications to the education program.

#### **D. Annual Reporting**

1. Corteva must submit annual reports to EPA by January 15<sup>th</sup> of each year containing the following:
  - a. Annual sales of Enlist seed and this product by state.
  - b. The current grower agreement.
  - c. The current education program and associated materials, and 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 Corteva's efforts aimed at achieving compliance with the grower agreement.
  - e. Investigation and remediation of cases regarding suspected resistant weeds. Summary of Corteva's determinations as to whether any reported lack of herbicide efficacy was suspected resistance, Corteva's follow-up actions taken, and, if available, the ultimate outcome (e.g., evaluation of success of additional weed control measures) regarding each case of suspected resistance. In the annual report, Corteva will list the cases of suspected resistance by county and state.
  - f. The results of the annual survey, including whether growers are implementing herbicide resistance BMPs, and a summary of Corteva's annual review and possible modification – based on that survey – of the education program, grower agreement compliance efforts, and response to reports of suspected resistance.
  - g. Summary of the status of any laboratory and greenhouse testing performed by, or at the direction of Corteva following up on incidents of suspected resistance, performed in the previous year. Data pertaining to such testing do not need to be included in the annual reports, but such data must be made available to EPA upon request.
  - h. Corteva is also obligated under 40 CFR Part 159 to report product failure to EPA and must follow those procedures and reporting schedule.
2. Following submission of the annual report, Corteva shall meet with the EPA at EPA's request to evaluate and consider the information contained in the report.