



# ENLIST™ WEED CONTROL SYSTEM 2019 PRODUCT USE GUIDE

Enlist<sup>™</sup> herbicides, used with Enlist corn, Enlist cotton and Enlist E3<sup>™</sup> soybeans





# **Enlist**Ahead

## What you'll find inside:

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# Get the best results with the Enlist<sup>™</sup> Ahead management resource

Enlist<sup>™</sup> Ahead is a management resource that helps you get the best results from the Enlist weed control system while protecting herbicide-tolerant technology for the future. Enlist Ahead provides educational resources, such as this *Product Use Guide*, describing label requirements, responsible stewardship and best practices that help you:

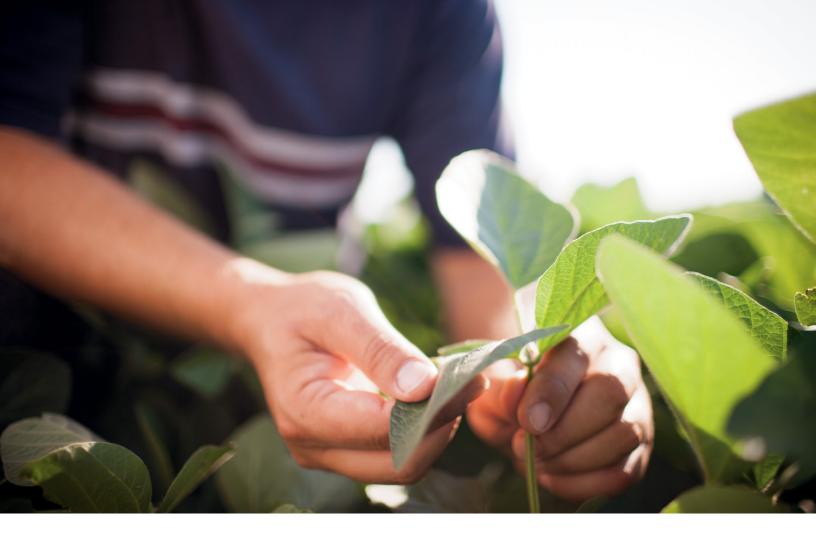
- Make on-target applications on your crops.
- Select and use different modes of action in the same growing season.
- Prevent herbicide resistance from developing in your fields (Learn more on this topic on Pages 12 and 13).

Following the best practices presented in Enlist Ahead will help you achieve optimum results and sustain the long-term performance of the Enlist weed control system. It is also important to read and follow the refuge requirements and Insect Resistance Management (IRM) requirements in the Dow AgroSciences *Corn Product Use Guide* and *Cotton Product Use Guide*.

## Responsible product use and stewardship

This guide includes requirements and recommendations for the Enlist<sup>™</sup> weed control system. Follow this guide, along with the Technology Use Agreement and product labels, for full compliance and better results when you apply Enlist Duo<sup>®</sup> or Enlist One<sup>™</sup> herbicide with Colex-D<sup>®</sup> technology. Enlist Duo and Enlist One with Colex-D technology are the only herbicides containing 2,4-D that are labeled for use with Enlist crops.

Enlist Duo and Enlist One herbicides are not registered for sale or use in all states or counties. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your area. Always read and follow label directions.



## What you'll need to use this technology

Before you can legally obtain, plant or grow crops containing the Enlist" trait, you must have a valid, executed Technology Use Agreement on file with Dow AgroSciences.

You can electronically sign the agreement at **AgCelerate.com** or through the AgCelerate app. You may request a duplicate copy of your signed agreement by calling **800-901-0012**.

You also can sign the Technology Use Agreement by:

- · Calling 877-4-TRAITS (877-487-2487)
- Visiting traitstewardship.com
- Contacting your seed seller

You should always review your Technology Use Agreement and consult your trait provider's technical guides before planting – and always read and follow pesticide label directions. If you have questions about this guide or a crop containing Dow AgroSciences technologies and traits, contact your seed seller or Dow AgroSciences at **877-4-TRAITS (877-487-2487)**.

## Why crop and grain marketing stewardship matters

Dow AgroSciences is committed to bringing new products to the marketplace in a responsible manner. As a member of Excellence Through Stewardship<sup>®</sup> (ETS), Dow AgroSciences follows ETS guidelines for product launch stewardship as well as the company's Product Launch Stewardship Policy.



As you select hybrids for your crop plan, Dow AgroSciences and the National Corn Growers Association (NCGA) recommend you read the Technology Use Agreement and *Product Use Guide* prior to planting, so you understand crop requirements and can ensure that all exported grain goes only to approved corn markets.

You should direct any grain or other material produced from Enlist<sup>™</sup> crops so it is only exported to or used in, processed in or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotechnology traits across borders into nations where import is not permitted. Talk to your grain handler or product purchaser to confirm his or her buying position for this product. Enlist cotton and Enlist corn have full import approval in key countries. Enlist soybeans will be grown in 2019 for seed production as Dow AgroSciences continues to pursue import approvals in additional countries, including China, for Enlist E3<sup>™</sup> soybean products.

You can find information about the regulatory and market status of agricultural biotechnology products at: **biotradestatus.com**. You can find more information about your crop or grain marketing options by contacting Dow AgroSciences at **877-4-TRAITS (877-487-2487)**.



## Why monitoring compliance is important

Stewardship is achieved by your adherence to the Technology Use Agreement, *Product Use Guides* and all applicable product labels. Identifying fields where Enlist<sup>™</sup> crops are grown and what herbicides are applied to these fields is key information required to monitor compliance. Through third-party surveys and on-farm assessments, farmers may receive a request for information about fields planted with Enlist crops and herbicides used. Failure to follow stewardship requirements will result in action by Dow AgroSciences that may include requiring additional education and training, monitoring and up to and including loss of access to the technology.

## Helpful resources for you

- Website for the Enlist<sup>™</sup> system: **Enlist.com**
- Qualified tank-mix products: EnlistTankMix.com<sup>1</sup>
- Cotton stalk destruction: texasagriculture.gov/RegulatoryPrograms/ CottonStalkDestruction.aspx
- Herbicide Resistance Action Committee: hracglobal.com
- Take Action: iwilltakeaction.com
- Trait Regulatory and Market Status: biotradestatus.com
- Trait Stewardship: traitstewardship.com
- Weed Resistance Risk Assessment Tool: weedtool.com
- Weed Resistance Management Training: soygrowers.com
- Weed Science Society of America: wssa.net

<sup>1</sup>Products listed on EnlistTankMix.com have not been tested for crop response or physical tank-mix compatibility. Listing on website does not imply agronomic recommendation or endorsement of use.





## Corn, soybeans and cotton with the Enlist" trait

## What to know about Enlist" corn

When you plant any corn hybrid with the Enlist<sup>™</sup> corn trait, you get crop tolerance to 2,4–D choline, glyphosate and aryloxyphenoxypropionate (FOP) herbicides. Enlist corn provides crop tolerance that enables you to use Enlist Duo<sup>®</sup> or Enlist One<sup>™</sup> herbicide as part of a program approach for weed control.

	HERBICIDE T		N HYBRIDS
	SMARTSTAX® ENLIST	POWERCORE® ENLIST	ENLIST <sup>™</sup> ROUNDUP READY® CORN 2
2,4-D CHOLINE	Tolerant	Tolerant	Tolerant
GLYPHOSATE	Tolerant	Tolerant	Tolerant
FOP HERBICIDES	Tolerant	Tolerant	Tolerant
GLUFOSINATE <sup>2</sup>	Tolerant	Tolerant	Not tolerant
CYCLOHEXANEDIONE (DIM) HERBICIDES	Not tolerant	Not tolerant	Not tolerant

#### Controlling volunteer corn

Because Enlist corn is tolerant to 2,4-D choline, glyphosate and FOP herbicides, use a cyclohexanedione (DIM) herbicide, such as Select Max or Poast Plus, to control volunteer Enlist corn in subsequent years.

<sup>2</sup>HERBICIDE TOLERANCE

Some Bt corn hybrids are available with Roundup Ready<sup>®</sup> and LibertyLink<sup>®</sup> herbicide tolerance traits, making them tolerant to over-the-top applications of glyphosate and glufosinate-ammonium herbicides. Verify the weed control system before making over-the-top herbicide applications. Always read and follow label directions. Use of a herbicide over the top of a corn hybrid that does not contain the tolerance trait for the herbicide will cause crop damage.

Enlist E3<sup>™</sup> soybeans were jointly developed by Dow AgroSciences and MS Technologies.



# When growing Enlist<sup>™</sup> corn near conventional corn and/or corn without the Enlist trait (coexistence)

Corn is a naturally cross-pollinated crop, and a small amount of corn pollen movement to nearby fields is not uncommon. You can reduce undesired pollen movement with a few simple steps:

- Maintain a noncorn buffer between fields containing crops with biotechnology traits and conventional crop fields.
- Consider field location relative to the field containing biotech traits: cornfields oriented upwind will have less cross-pollination compared with fields located downwind.
- Discuss your plans with relevant neighbors in advance.

#### Use only herbicides authorized for application with Enlist<sup>®</sup> corn

Following burndown, Enlist Duo<sup>®</sup> and Enlist One<sup>™</sup> with Colex-D<sup>®</sup> technology are the only herbicides containing 2,4-D that are labeled for preemergence and postemergence use with Enlist<sup>™</sup> corn. DuPont<sup>™</sup> Assure<sup>®</sup> II herbicide (quizalofop) is the only FOP herbicide expressly labeled for preemergence and postemergence use with Enlist corn.



## What to know about Enlist E3" soybean varieties

When you plant Enlist E3<sup>™</sup> soybean varieties, you get crop tolerance to 2,4-D choline, glyphosate and glufosinate. Enlist E3 soybeans provide crop tolerance that enables you to use Enlist Duo<sup>®</sup> or Enlist One<sup>™</sup> herbicide as part of a program approach for weed control.

HERBICIDE TOLERANCE OF ENLIST E3<sup>®</sup> SOYBEAN VARIETIES

2,4-D CHOLINE

GLYPHOSATE

GLUFOSINATE

# When growing Enlist E3<sup>™</sup> soybeans near conventional soybeans and/or soybeans without the Enlist E3 trait (coexistence)

Soybeans are a naturally self-pollinating crop with very low risk of mixing by cross-pollination. Consult **biotradestatus.com** for regulatory approval information. Enlist E3 soybeans grown in 2019 will be subject to protocols established for soybean seed production.

### Use only herbicides authorized for application with Enlist E3" soybeans

Following burndown, Enlist Duo and Enlist One with Colex-D<sup>®</sup> technology are the only herbicides containing 2,4-D that are labeled for preemergence and postemergence use with Enlist E3<sup>™</sup> soybeans.

Enlist E3" soybeans were jointly developed by Dow AgroSciences and MS Technologies.

## What to know about Enlist" cotton

When you plant any Enlist<sup>™</sup> cotton variety, you get crop tolerance to 2,4–D choline, glyphosate and glufosinate herbicides. Enlist cotton provides crop tolerance that enables you to use Enlist Duo<sup>®</sup> or Enlist One<sup>™</sup> herbicide as part of a program approach for weed control.

HERBICIDE TOLERANCE OF ENLIST <sup>®</sup> COTTON VARIETIES
TRAIT STACK: WIDESTRIKE <sup>®</sup> 3 INSECT PROTECTION, ROUNDUP READY <sup>®</sup> FLEX, ENLIST <sup>®</sup>
2,4-D CHOLINE
GLYPHOSATE
GLUFOSINATE

### Stalk destruction for Enlist" cotton

Enlist cotton is tolerant to 2,4–D choline, glyphosate and glufosinate herbicides – therefore, stalk destruction cannot be managed with any of those herbicides. The recommended herbicide for stalk destruction of Enlist cotton stalks is two applications of Duplosan from Nufarm. Duplosan provides farmers a tool to manage Enlist cotton stalk regrowth and squaring, enabling compliance with the Texas Department of Agriculture's Boll Weevil Eradication Program standards. The recommendation for using Duplosan herbicide for Enlist cotton stalk destruction may differ from traditional chemical stalk destruction procedures. Duplosan is available for use in cotton stalk destruction in Texas via a 24(c) Registration.

For more information on the Boll Weevil Eradication Program and complete requirements, visit the Texas Department of Agriculture website: TexasAgriculture.gov/RegulatoryPrograms/CottonStalkDestruction

## When growing Enlist<sup>™</sup> cotton near conventional cotton and/or cotton without the Enlist trait (coexistence)

Cotton is a naturally cross-pollinated crop, and a small amount of cotton pollen movement to nearby fields is not uncommon. You can reduce undesired pollen movement with a few simple steps:

- Maintain a noncotton buffer between fields containing crops with biotechnology traits and conventional crop fields.
- Consider field location relative to the field containing biotech traits: cotton fields oriented upwind will have less cross-pollination compared with fields located downwind.
- Discuss your plans with relevant neighbors in advance.

### Use only herbicides authorized for application with Enlist<sup>™</sup> cotton

Following burndown, Enlist Duo and Enlist One with Colex-D<sup>®</sup> technology are the only herbicides containing 2,4-D that are labeled for preemergence and postemergence use with Enlist cotton.



Glyphosate technology became the farm industry standard for weed control for many farmers. But using glyphosate as the primary, or only, herbicide mode of action has resulted in an increase in glyphosate-resistant and hard-to-control weeds, including waterhemp, marestail, Palmer amaranth and giant ragweed. Repeated use of any single herbicide may reduce its effectiveness for weed control.

You can help manage weed resistance with an understanding of herbicide resistance and taking steps to prevent it.

## How weed resistance spreads

For the first few years you use a herbicide, **targeted** weeds are controlled. However, if you repeatedly apply the same herbicide – or herbicides with the same mode of action – a few naturally occurring **resistant** weeds can remain in the field each year. As time goes on and resistant weeds thrive, the weed population starts to contain an even larger number of resistant weeds. Over time, the resistant weeds become the dominant population – rendering the herbicide no longer effective on that species.

The Enlist" weed control system provides an effective tool to use against these herbicide-resistant weeds. Use the Enlist system as part of an integrated weed management program to deliver the exceptional performance you need.



## Take advantage of different herbicide modes of action

It is a best practice to minimize selection for herbicide-resistant weed populations by proactively diversifying weed control strategies. A diversified weed management program may include the use of multiple herbicides with different modes of action and an overlapping weed spectrum in combination with other practices, such as tillage operations and/or other cultural practices where appropriate. Using the labeled rate for herbicides and following directions for use is important to help prevent the onset of resistance.

The Weed Science Society of America (WSSA) classifies 2,4–D as a Group 4 herbicide (synthetic auxin) and glyphosate as a Group 9 herbicide (inhibitor of EPSP synthase). As with some herbicides, some naturally occurring weed biotypes that are resistant to 2,4–D or glyphosate may exist due to genetic variability in a weed population.

## Steps to help prevent weed resistance

Implementing a successful weed resistance management program will help ensure the continued efficacy of the Enlist<sup>™</sup> weed control system. These steps are important to the ongoing success of your program.

#### 1) Use a herbicide PROGRAM APPROACH – with multiple modes of action

- Use a broad-spectrum soil residual herbicide with different modes of action in a weed control program, followed by a timely postemergence application of an Enlist herbicide.
- If resistance is suspected, treat weed escapes with a herbicide that has a mode of action other than Group 4 or Group 9 (if Enlist Duo<sup>®</sup> herbicide was used) or Group 4 (if Enlist One<sup>®</sup> herbicide was used) and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing seed, root or tuber production.
- Utilize sequential applications of herbicides with alternative modes of action.
- Rotate the use of an Enlist herbicide with non-Group 4 and non-Group 9 herbicides (when using Enlist Duo) or non-Group 4 (when using Enlist One).
- Never use Enlist One alone. Always plan a program approach with Enlist One plus additional qualified tank-mix partners containing non-Group 4 herbicides, or sequential postemergence applications of non-Group 4 herbicides.
- Avoid using more than three applications of an Enlist herbicide and any other Group 4 or Group 9 herbicide (when using Enlist Duo) or Group 4 (when using Enlist One) within a single growing season unless in conjunction with another mode of action herbicide with an overlapping spectrum.

### 2 Make TIMELY APPLICATIONS of herbicides

• Apply full labeled rates of an Enlist herbicide for the most difficult-to-control weed in the field at the specified time (correct weed size) to minimize weed escapes.

#### 3) SCOUT WEEDS before and after application

- Scout fields before application to ensure herbicides and use rates will be appropriate for the weed spectrum and weed size present.
- Scout fields after application to detect weed escapes or shifts in the weed spectrum.
- Early detection of possible resistant species can limit the spread of these weed populations and allow for the implementation of alternate weed management practices.

## 4) SEE THE BIG PICTURE, beyond the field and the herbicide

- Incorporate nonchemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Manage weeds in and around fields, during and after harvest, to reduce weed seed production.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.

#### 5 Agronomic and cultural PRACTICES

- Rotate crops and cultural practices to allow for a wider range of weed control practices.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Use only commercial, weed-free crop seed.

Report any incidence of nonperformance of an Enlist herbicide against a particular weed species to a Dow AgroSciences representative or 855-ENLIST1 (855-365-4781).











## Take control of tough weeds with Enlist Duo® and Enlist One<sup>™</sup> herbicides

Enlist Duo® herbicide with Colex-D® technology combines the proven performance of 2,4-D choline and glyphosate in a convenient, proprietary blend. Enlist One" herbicide is a straight-goods 2,4-D choline product with Colex-D technology that provides additional tank-mix flexibility with products listed on EnlistTankMix.com,<sup>1</sup> such as glufosinate, glyphosate, residual herbicides and insecticides.

Following burndown, Enlist Duo and Enlist One with Colex-D technology are the only herbicides containing 2,4-D that are labeled for preemergence and postemergence use with Enlist<sup>™</sup> crops.

Enlist herbicides control tough and herbicide-resistant weeds, including, but not limited to:

- Common ragweed
  Giant ragweed
  Lambsquarters
- Marestail<sup>3</sup>
   Morningglory

(including Palmer amaranth<sup>3</sup>)

Piqweed

✓ Velvetleaf

✓ Waterhemp

## On-target characteristics of Enlist<sup>™</sup> herbicides

With the inherent near-zero volatility of 2,4-D choline plus Colex-D<sup>®</sup> technology, Enlist Duo<sup>®</sup> and Enlist One<sup>™</sup> herbicides provide effective weed control with better on-target results than traditional 2,4-D products. However, you should prepare for applications carefully, following all label instructions that help minimize the potential for physical drift.



## Select the right application rate

Apply 4.75 pints of Enlist Duo or 2 pints of Enlist One per acre to young, actively growing annual weeds, according to the product label directions.<sup>5</sup> With the prevalence of glyphosate-resistant weeds, it is recommended to use the high rates of Enlist herbicides for maximum efficacy. Spray when weeds are 6 inches tall or less.

	APPLICATION RATE
HERBICIDE	GLYPHOSATE-RESISTANT OR HARD-TO-CONTROL WEEDS
Enlist Duo®	4.75 pt./A
Enlist One™	2 pt./A

The product labels for Enlist Duo and Enlist One also contain important information about application equipment requirements, restrictions and precautions, and weed management.<sup>5</sup>

### Follow application and use restrictions

Refer to the product labels for specific planting restrictions, weed height and use information for annual and perennial weeds.

<sup>1</sup>Products listed on EnlistTankMix.com have not been tested for crop response or physical tank-mix compatibility. Listing on website does not imply agronomic recommendation or endorsement of use.

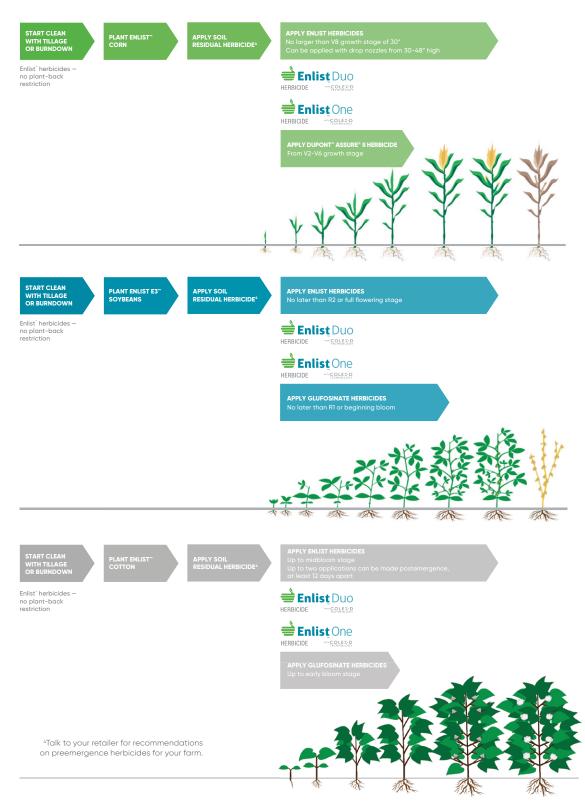
<sup>3</sup>May require a broader management plan including timely application and use of a soil residual herbicide: <sup>5</sup>Always read and follow the product label as well as state and local requirements.



## Use Enlist" herbicides as part of a program approach

You'll have the greatest success in weed management if you use an Enlist<sup>™</sup> herbicide as part of a program approach for weed control in Enlist crops. This improves weed control, reduces weed competition during key stages of crop growth and helps manage herbicide resistance.

For season-long weed control in Enlist crops, start with a broad-spectrum soil residual herbicide containing at least two non-Group 4 or non-Group 9 (if using Enlist Duo® herbicide) or non-Group 4 (if using Enlist One™ herbicide) modes of action, followed by a postemergence application of Enlist Duo or Enlist One. If a second postapplication of Enlist Duo or Enlist One is needed, wait at least 12 days after the first application.



## Reduce spray drift to improve on-target application

To minimize potential for herbicide drift, consider these factors when deciding when and how to apply an Enlist" herbicide:

- Ensure all weather conditions, such as wind direction, wind speed, temperature and relative humidity, are within label parameters.
- Confirm the method of application is also consistent with the label.

Always read and follow the product label as well as state and local requirements related to application of pesticides. Apply an Enlist herbicide only with properly calibrated ground application equipment.



## Check wind, weather and nearby crops

An important part of stewardship with the Enlist weed control system is staying aware of your surroundings. It is especially important to protect susceptible plants that might be damaged by herbicide applications.

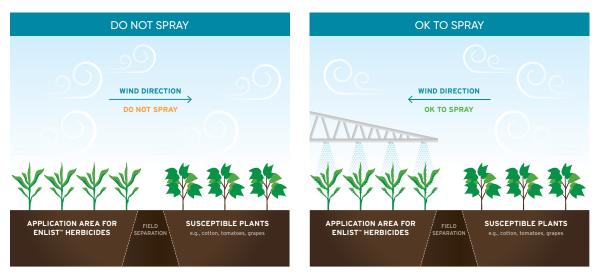


## Avoid downwind susceptible plants

Do not apply an Enlist herbicide under circumstances where spray drift may occur to food, forage or other plantings that might be damaged or rendered unfit for sale, use or consumption. Do not allow contact of the herbicide with foliage, green stems or exposed nonwoody roots of crops or desirable plants, including trees and cotton without the Enlist trait, because severe injury or destruction may result. Even small amounts of spray drift that may not be visible may injure susceptible broadleaf plants.

Before making an application, please refer to your state's sensitive-crop registry (if available) to identify any commercial specialty or certified organic crops that may be located nearby. At the time of your application, the wind cannot be blowing toward adjacent commercially grown tomatoes and other fruiting vegetables (U.S. Environmental Protection Agency (EPA) Crop Group 8), cucurbits (EPA Crop Group 9), grapes or cotton without the Enlist trait.

## DO NOT APPLY AN ENLIST<sup>™</sup> HERBICIDE IF THE WIND IS BLOWING TOWARD SUSCEPTIBLE CROPS





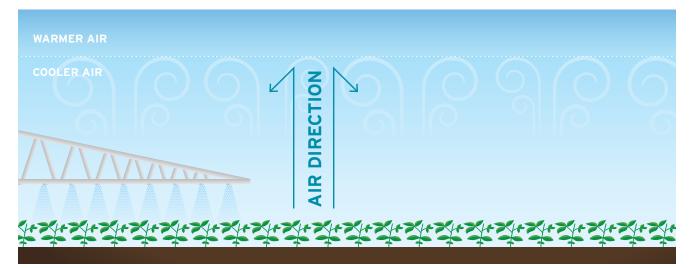
### Check for a temperature inversion before every application

A temperature inversion occurs when layer of warm air covers a layer of cooler air and acts like a lid, preventing the cooler air from rising and dissipating into the upper atmosphere. During a temperature inversion, spray particles can become trapped in the warmer layer of air and stay suspended until wind movement increases, resulting in off-target movement. Never spray if you suspect a temperature inversion. You run the risk of damaging susceptible plants in nearby fields, lawns and gardens. Wait until later in the day and check again for a more favorable application environment.

Before every herbicide application, use steps like these to make sure a temperature inversion is not occurring:

- Monitor temperatures using weather apps for your smartphone when planning an application, and always check conditions in the field. If temperature is within 5 degrees of the overnight low, closely check wind speed and particle movement in the field.
- Measure wind speed using an anemometer. If wind is less than 3 mph, do not spray.
- Use smoke or powder to indicate particle movement the smoke or powder should drift gently with the wind. If it gathers in a stationary, suspended cloud, that indicates a temperature inversion – do not spray.
- Measure the temperature at ground level (approximately 3 feet) and at 7 feet above ground. If the difference is more than a few degrees, it is considered an inversion.

## DO NOT APPLY AN ENLIST<sup>™</sup> HERBICIDE IF YOU SUSPECT A TEMPERATURE INVERSION





## Selecting the right nozzles

The right nozzles can maximize product performance by managing the interaction between application volume, nozzle flow rate, nozzle type, operating pressure, travel speed, nozzle spacing and droplet size category. **Only use nozzle and pressure combinations specifically listed on the Enlist Duo® or Enlist One™ herbicide label.**<sup>5</sup>



#### Enlist Duo<sup>®</sup> herbicide LABELED NOZZLES WITH PRESSURE RANGES

#### Enlist One" herbicide LABELED NOZZLES WITH PRESSURE RANGES

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D025			MIN 30				MAX	80		
004		MIN 15					MAX	80		
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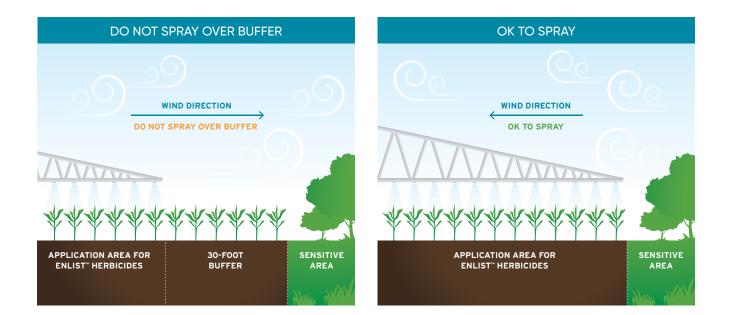
### Steps to protect sensitive areas

The labels for Enlist One<sup>™</sup> and Enlist Duo<sup>®</sup> herbicides require a downwind buffer from sensitive areas, which may be a habitat for endangered species.<sup>5</sup>

To minimize the chance for an Enlist<sup>™</sup> herbicide to come in contact with sensitive areas, you must maintain a 30-foot downwind buffer (in the direction in which the wind is blowing) from any area except:

- 1) Roads (paved or gravel surfaces)
- 2) Planted agricultural fields (except those crops mentioned in the "susceptible plants" section)
- 3) Agricultural fields that have been prepared for planting
- 4 Areas covered by the footprint of a building, shade house, silo, feed crib or other man-made structure with walls and/or roof

To maintain the required downwind buffer zone, measure wind direction prior to the start of any swath that is within 30 feet of a sensitive area. No application swath can be initiated in or into an area that is within 30 feet of a sensitive area if the wind direction is toward the sensitive area.



## Know and follow state and local requirements

When you apply an Enlist<sup>™</sup> herbicide, you must follow all state and local pesticide application requirements for Enlist Duo<sup>®</sup> and/or Enlist One<sup>™</sup> herbicides. Where states have more stringent regulations, they must be observed. Enlist Duo and Enlist One are not registered for sale or use in all states or counties. Always read and follow label directions.

<sup>5</sup>Always read and follow the product label as well as state and local requirements.



# Clean out the sprayer and all spray equipment after applying an Enlist<sup>®</sup> herbicide

After applying an Enlist<sup>™</sup> herbicide, be sure to clean out the sprayer before making your next application to any other crop. Thorough cleanout of the entire sprayer – including spray tank, boom, screens, filters, hoses and nozzles – is the first step to minimize the potential for sprayer contamination and damage to susceptible crops. Also, remember to clean equipment, such as pumps, before switching to the next product.



TRIPLE-RINSE SPRAYER	UNLESS THE NEXT CROP YOU'RE SPRAYING IS GLYPHOSATE-TOLERANT CORN
As outlined in this	Single-rinse sprayer with at least
Product Use Guide	10% of sprayer volume



- (1) Completely drain the system (including pump, lines and spray boom) for at least five minutes.
- 2) Fill the tank with clean water to at least 10 percent of the total tank volume.
- 3) Circulate through the entire system for at least 15 minutes.
- 4) Spray out the solution through the boom/nozzles.



- 1 Completely drain the spray system (including lines and spray boom) for at least five minutes.
- 2 Remove and clean the filters and strainers.
- 3) Fill the tank with clean water to at least 10 percent of total tank volume (including cleaning agents at recommended rates, if desired).
- 4) Circulate through the entire system for at least 15 minutes.
- 5) Let the solution stand for several hours, preferably overnight if time allows.
- 6) Spray out the solution through the boom/nozzles.



- (1) Completely drain the spray system (including lines and spray boom) for at least five minutes.
- 2) Fill the tank with clean water to at least 10 percent of the total tank volume.
- 3) Circulate through the entire system for at least 15 minutes.
- 4) Spray out the solution through the boom/nozzles.
- 5 Completely drain the spray system; remove and clean nozzle tips and strainers separately.

## Record your application details

As part of good farm management practices, maintain detailed records of spraying, including:

- Field location and number of acres sprayed
- Crop sprayed and stage of growth
- Date of application, start time and finish time
- Herbicide sprayed and application rate
- Nozzles used and operating pressure

- Travel speed and application rate
- Air temperature and relative humidity
- Wind speed and direction
- Sprayer and boom cleanout



## Applying an Enlist<sup>®</sup> herbicide in a tank mix with other products

The wide application window for an Enlist" herbicide offers opportunities for tank mixes with other qualified products, such as other herbicides, fungicides, micronutrients, insecticides and adjuvants. Only tank-mix partners listed on EnlistTankMix.com<sup>1</sup> may be used with Enlist Duo® or Enlist One" herbicide.

## Qualified tank-mix partners ARE:

Products that passed the EPA-mandated drift testing protocol, which is part of the conditions of registration for Enlist herbicides.

## Qualified tank-mix partners ARE NOT:

- Tested for crop response
- Tested for physical tank-mix compatibility
- An agronomic recommendation
- An endorsement of any kind from Dow AgroSciences
- An indicator of performance

As part of the conditions of registration for Enlist herbicides, the EPA established a tank-mix testing protocol. One reason the drift testing protocol exists is to protect sensitive areas, where endangered species may have habitat, from spray drift.

All qualified tank-mix products have passed established standards for spray performance. The most current list, which has the only tank-mix partners allowed by the EPA, is available at **EnlistTankMix.com.**<sup>1</sup>

Refer to all individual product labels, supplemental labeling and fact sheets for all products in the tank mixture, and observe all precautions and limitations on the labels, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines. Use according to the most restrictive precautionary statements for each product in the tank mixture.

The addition of tank-mix products may cause increased crop response, e.g., leaf burn. Applications of products containing crop oils or vegetable-based oils are more likely to result in a crop response.

## Tank-mix sequence procedures

Be sure to start with a clean sprayer before mixing a load with Enlist<sup>™</sup> herbicides. Remember the required water carrier volume with Enlist herbicides is 10 to 15 gallons per acre.<sup>5</sup>

Begin with half-full tank of water. Begin agitation and continue throughout mixing process. Add products in the following order:

- 1) AMS/water-conditioning agents
- 2 Preslurry water-soluble packets
- 3 Wettable powders/dry flowables
- 4 Compatibility agents
- 5 Liquid flowables
- 6 Capsule suspension (CS) or suspension emulsion (SE)
- 7 Emulsifiable concentrate (EC)
- 8 Crop oil concentrate (COC), NIS, other
- 9 Top off with water carrier

#### EMULSIFIABLE CONCENTRATE (EC) INCLUDES:

- Soluble liquids (SL)
- Enlist Duo® herbicide at 4.75 pt./A
- Enlist One™ herbicide at 2 pt./A
- Glyphosate products

Do not pour glufosinate ammonium products or glyphosate potassium into the tank at the same time as Enlist One. Add products one at a time, allowing enough time for recirculation between additions of each separate product. Be sure to use sufficient water throughout the mixing process.

### Special directions for tank-mixing certain qualified partners

#### Ammonium sulfate/water-conditioning agents

The addition of an ammonium sulfate (AMS) or water-conditioning agent helps maintain optimum performance of an Enlist<sup>®</sup> herbicide on annual and perennial weeds, particularly under hard water conditions or drought conditions. The addition of AMS products does not affect the inherent low-volatility qualities of the 2,4-D choline in Enlist herbicides. The most current list of qualified AMS and water-conditioning agents is available at EnlistTankMix.com.<sup>1</sup>

#### Anti-foam/defoamers

The addition of an anti-foaming agent is highly encouraged for ease of mixing and sprayer cleanout. The most current list of qualified anti-foam/defoamers is available at **EnlistTankMix.com**.<sup>1</sup>

If you have further questions about proper handling and use of these products, or if you become aware of potential misuse or incidents involving these products, please contact Dow AgroSciences at **855-ENLIST1 (855-365-4781)**. Dow AgroSciences is a founding member of Excellence Through Stewardship® and is a Responsible Care® company.

<sup>1</sup>Products listed on EnlistTankMix.com have not been tested for crop response or physical tank-mix compatibility. Listing on website does not imply agronomic recommendation or endorsement of use.

<sup>5</sup>Always read and follow the product label as well as state and local requirements

## Apply with confidence

Successful use of Enlist<sup>™</sup> herbicides begins with proper application. Below is a summary of best management practices for applying an Enlist herbicide. Visit **Enlist.com/Apply** for a downloadable Application Guide. Always read and follow label requirements.

#### **BEFORE SPRAYING**



#### **Application window**

Apply Enlist<sup>™</sup> herbicides within the appropriate growth stage windows.

- Enlist cotton: Up to midbloom stage
- Enlist E3<sup>™</sup> soybean: No later than R2 or full flowering stage
- Enlist corn: No larger than V8 growth stage or 30" tall, whichever happens first



#### Tank-mix partners

Only tank-mix Enlist Duo<sup>®</sup> and Enlist One<sup>™</sup> herbicides with qualified tank-mix partners. Find them at **EnlistTankMix.com**.<sup>1</sup>

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#### Nozzles

Use only nozzle and pressure combinations listed on the product labels of Enlist herbicides.<sup>5</sup>



#### Sprayer contamination

Clean your sprayer before using Enlist herbicides to avoid contamination from a prior application.

#### PAY SPECIAL ATTENTION TO WIND AND WEATHER CONDITIONS



#### Wind speed

Drift potential is lowest at wind speeds less than 10 mph. Target applications at wind speeds greater than 3 mph but less than 10 mph. **Caution: Do not apply at wind speeds** greater than 15 mph.

Consult: Some states have additional restrictions on wind speed. Check your state regulations on wind speed.

#### **Temperature inversions**

Do not spray during a temperature inversion. Caution: Inversions are more common between dusk and dawn.



#### Susceptible crops

Spray when wind is blowing away from susceptible crops listed on the Enlist herbicide labels. This includes: tomatoes, fruiting vegetables, cucurbits, grapes, cotton without the Enlist trait and tobacco.

Caution: There is no acceptable buffer distance when the wind is blowing toward an adjacent susceptible crop. Do not spray if wind is blowing toward a susceptible crop.

#### APPLICATION



#### Spray volume

Use a spray volume of 10 to 15 gallons or more per acre for ground equipment and apply with calibrated ground equipment.

Do not apply less than 10 gallons of total spray volume per acre. In general, increase spray volume as crop canopy, height and weed density increase to obtain adequate spray coverage.<sup>5</sup>

#### Spray rate

Use spray rates from the product label when weeds are shorter than 6 inches and crops are within the appropriate growth stage window.

- Enlist Duo<sup>®</sup>: Spray 4.75 pints per acre in all fields with glyphosate-resistant or hard-to-control weeds.
- Enlist One<sup>™</sup>: Spray 2 pints per acre in all fields with glyphosate-resistant or hard-to-control weeds.



#### Spray pressure

Use an appropriate spray pressure based on product label requirements and conditions.

Ground speed, product volume and nozzle selection all factor into the appropriate spray pressure.



#### Boom height

To minimize spray drift potential, maintain a boom height as specified by the nozzle manufacturer, usually 24 inches or less above crop canopy.<sup>5</sup>

#### AFTER SPRAYING



#### Cleanout

After applying an Enlist<sup>™</sup> herbicide, follow the proper steps to clean out your sprayer. Triple rinse is required for all cleanouts unless the next crop you are spraying is glyphosate-resistant corn.

<sup>1</sup>Products listed on EnlistTankMix.com have not been tested for crop response or physical tank-mix compatibility. Listing on website does not imply agronomic recommendation or endorsement of use.

<sup>5</sup>Always read and follow the product label as well as state and local requirements.

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