2016 Product Use Guide for Enlist™ Cotton
Start out right with the Enlist™ Ahead management resource

Enlist™ 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. Through Enlist Ahead, Dow AgroSciences provides educational resources, such as this Product Use Guide, describing responsible stewardship and best practices that help you:

• 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 6 and 7)

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 also is important to read and follow the Dow AgroSciences Cotton Product Use Guide for refuge and Insect Resistance Management (IRM) requirements.

Dow AgroSciences promotes responsible product use and stewardship

This guide includes requirements and recommendations for the Enlist™ weed control system. Follow this guide, along with the Technology Use Agreement and product labels, to get better results when you grow Enlist cotton.

The only 2,4-D herbicides labeled for use with Enlist crops feature Colex-D® technology. Enlist Duo® herbicide with Colex-D technology is not yet registered for use in cotton. Enlist Duo CANNOT be used on Enlist cotton until the product is registered for sale or use on cotton in your state. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use on cotton in your state. Always read and follow label directions.

What you’ll need to use this technology

Before you can legally obtain, plant or grow cotton 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 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® (ETS), Dow AgroSciences follows ETS guidelines for product launch stewardship as well as the Dow AgroSciences Product Launch Stewardship Policy.

You should direct any material produced from Enlist™ crops so it is only exported to, 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 boundaries into nations where import is not permitted. Talk to your product purchaser to confirm his or her buying position for this product.

• Cottonseed, meal, linters or gin trash containing the Enlist trait cannot be imported into South Korea until pending import approvals have been secured.

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 product labels. Identifying fields where Enlist crops are grown and what herbicides are applied to these fields is key to monitor compliance. Through third-party surveys and on-farm assessments, growers 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 additional education and training, monitoring, and up to and including loss of access to the technology.

Enlist Ahead

Start out right with the Enlist™ Ahead management resource

Enlist™ 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. Through Enlist Ahead, Dow AgroSciences provides educational resources, such as this Product Use Guide, describing responsible stewardship and best practices that help you:

• 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 6 and 7)

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 also is important to read and follow the Dow AgroSciences Cotton Product Use Guide for refuge and Insect Resistance Management (IRM) requirements.

Dow AgroSciences promotes responsible product use and stewardship

This guide includes requirements and recommendations for the Enlist™ weed control system. Follow this guide, along with the Technology Use Agreement and product labels, to get better results when you grow Enlist cotton.

The only 2,4-D herbicides labeled for use with Enlist crops feature Colex-D® technology. Enlist Duo® herbicide with Colex-D technology is not yet registered for use in cotton. Enlist Duo CANNOT be used on Enlist cotton until the product is registered for sale or use on cotton in your state. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use on cotton in your state. Always read and follow label directions.

What you’ll need to use this technology

Before you can legally obtain, plant or grow cotton 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 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® (ETS), Dow AgroSciences follows ETS guidelines for product launch stewardship as well as the Dow AgroSciences Product Launch Stewardship Policy.

You should direct any material produced from Enlist™ crops so it is only exported to, 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 boundaries into nations where import is not permitted. Talk to your product purchaser to confirm his or her buying position for this product.

• Cottonseed, meal, linters or gin trash containing the Enlist trait cannot be imported into South Korea until pending import approvals have been secured.

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 product labels. Identifying fields where Enlist crops are grown and what herbicides are applied to these fields is key to monitor compliance. Through third-party surveys and on-farm assessments, growers 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 additional education and training, monitoring, and up to and including loss of access to the technology. 
What to know about Enlist™ cotton

When you plant any Enlist® cotton variety, you get crop tolerance to new 2,4-D choline, glyphosate (e.g., Roundup®) and glufosinate herbicides. Enlist cotton provides crop safety that enables you to use multiple modes of action to manage hard-to-control and resistant weeds as part of the weed control program for Enlist cotton. Read the Dow AgroSciences Cotton Product Use Guide for refuge and IRM requirements.

**HERBICIDE TOLERANCE OF ENLIST™ COTTON VARIETIES**

<table>
<thead>
<tr>
<th>Trait Stack: Widesrike® 3 Insect Protection, Roundup Ready® Flex, Enlist™</th>
<th>Tolerant</th>
</tr>
</thead>
<tbody>
<tr>
<td>New 2,4-D Choline</td>
<td>Tolerant</td>
</tr>
<tr>
<td>Glyphosate</td>
<td>Tolerant</td>
</tr>
<tr>
<td>Glufosinate</td>
<td>Tolerant</td>
</tr>
</tbody>
</table>

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 cotton variety that does not contain the tolerance trait for the herbicide will cause crop damage.

**Stalk destruction for Enlist cotton**

When you plant Enlist cotton, it is tolerant to 2,4-D choline, glyphosate and glufosinate herbicides. An integrated approach using tillage, shredding and currently labeled herbicides should be used for stalk destruction. See texasagriculture.gov/RegulatoryPrograms/CottonStalkDestruction.aspx for additional information.

**Growing Enlist™ cotton near other cotton (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 on Enlist™ cotton**

Enlist cotton is tolerant to glyphosate, glufosinate and new 2,4-D choline. The only 2,4-D herbicides labeled for use with Enlist crops feature Colex-D® technology. Enlist Duo® herbicide is not yet registered for use in cotton. Enlist Duo CANNOT be used on Enlist cotton until the product is registered for sale or use on cotton in your state. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use on cotton in your state. Always read and follow label directions.

**Use a program approach**

You’ll have the greatest success in weed management if you use a program approach for weed control in Enlist® cotton. 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 multiple modes of action followed by a postemergence application of a registered herbicide.
Using multiple modes of action to help prevent herbicide resistance development

Roundup Ready® technology has become the farm industry standard for weed control for many growers. 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 effectiveness of 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.

Enlist® cotton enables using multiple modes of action as an effective tool to use against herbicide-resistant weeds. Use Enlist cotton as part of an integrated weed management program to deliver the exceptional performance you need.

Diversify your weed management program

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 and following directions for use are important to help prevent the onset of resistance.

Steps to help prevent weed resistance

Implementing a successful weed resistance management program will help ensure the continued efficacy of herbicides used with Enlist® cotton. 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 herbicide application.
   • If resistance is suspected, treat weed escapes with a herbicide that has a mode of action other than Group 4 or 9 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 glyphosate and glufosinate with non-Group 4 and non-Group 9 herbicides.
   • Avoid using more than two applications of any Group 4 or Group 9 herbicide 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 herbicide(s) for the most difficult-to-control weed in the field at the specified time (correct weed size) to minimize weed escapes.

3. SCOUT FOR WEEDS, before and after application
   • Scout fields before application to detect weed escapes or shifts in weed spectrum.
   • Scout fields after application to detect weed escapes or shifts in weed spectrum.

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.
Helpful resources for you

- Website for the Enlist™ system: Enlist.com
- Herbicide Resistance Action Committee: hracglobal.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

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.