



# Liberty<sup>®</sup> ULTRA

Herbicide – Powered by Glu-L<sup>™</sup> Technology





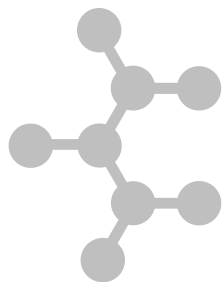
# Liberty<sup>®</sup> ULTRA Herbicide

## Powered by Glu-L<sup>™</sup> Technology

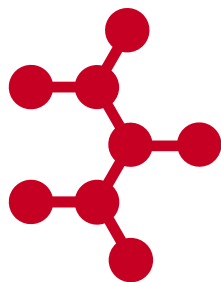


Glu-L Technology Isolates the D-isomer and Transforms it into Herbicidally Active L-isomer

**Racemic Glufosinate**  
*All Generic Glufosinate Today*

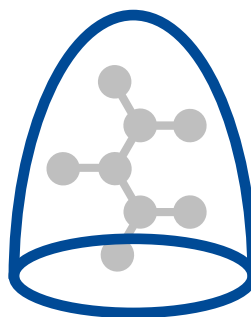


D-isomer

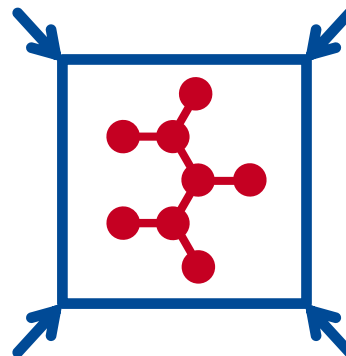


**Active L-isomer**

**Glu-L Technology**  
*Isolate then Transform*

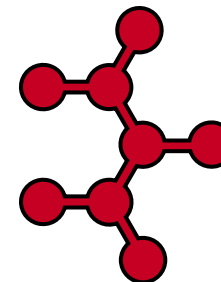


D-isomer



**Active L-isomer**

**Resolved Isomer of Glufosinate**  
*Liberty ULTRA Herbicide*



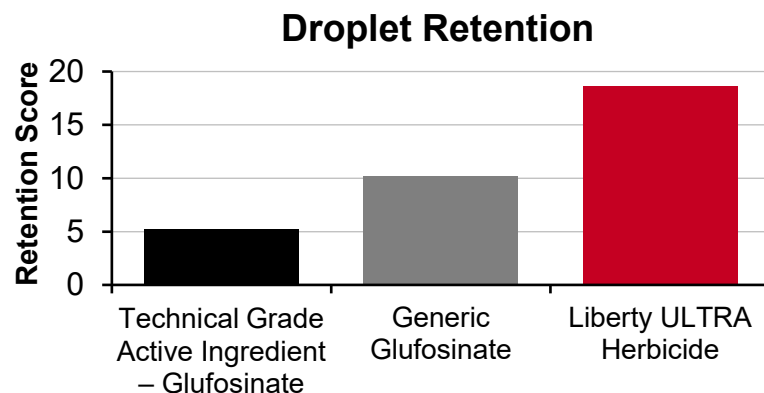
**Active L-isomer**

# The Liberty<sup>®</sup> Lock Formulation

## What Does Our Formulation Contribute?

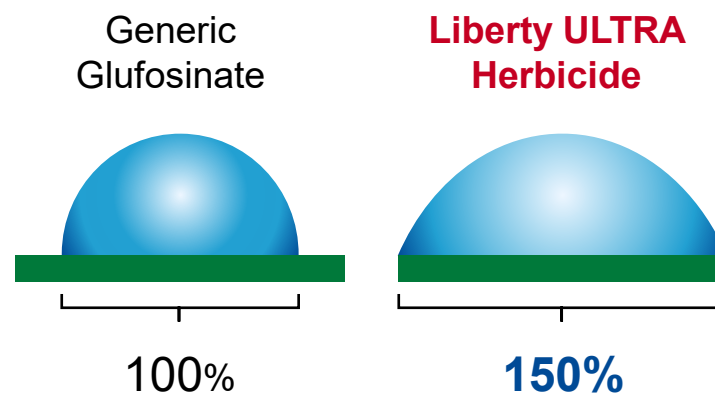


Applied droplets stick or bounce off,  
~2x more droplets of Liberty ULTRA  
herbicide are retained compared to  
generic glufosinate<sup>1</sup>



**BETTER RETENTION**  
on the leaf

Droplet spread improves coverage,  
Liberty ULTRA herbicide spreads on the  
leaf surface to cover 1.5x more area  
compared to generic glufosinate<sup>2</sup>



**BETTER DISPERSION**  
across the leaf

For contact herbicides  
leaf coverage is critical, Liberty ULTRA  
herbicide covers ~2x more leaf area  
compared to generic glufosinate<sup>3</sup>



**BETTER COVERAGE**  
on the leaf





1: Retention scores for each treatment represent the average retention score for common lambsquarters, kochia, and large crabgrass. BASF lab and growth chamber study to evaluate retention of glufosinate formulations, 2023. Analysis of fluorescence intensity counts by the plant leaf mass to determine retention score. 2: Percent spreading represents the area covered by a 1 µL droplet on a leaf surface on pigweed. BASF lab study to evaluate droplet spreading ability of glufosinate formulations, 2023. 3: BASF lab and growth chamber study to evaluate leaf coverage of glufosinate formulations, 2023.

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# Liberty ULTRA Rate Discussion

Standard (minimum recommended) rate for Corn, Cotton, and Soy will be 24fl oz

**Liberty<sup>®</sup> ULTRA**  
Herbicide – Powered by **Glu-L<sup>™</sup>** Technology

Crop		Liberty 280 SL Recommended Rate (fl oz / A)	Liberty ULTRA Recommended Rate (fl oz / A)	Postemergence Application Timing
Canola		29	19	Emergence up to early bolt
Corn (field and silage)		36 - 43	24 - 29	Emergence through V6
Cotton		36 - 43	24 - 29	Emergence up to early bloom
Soybean		36 - 43	24 - 29	Emergence up to but not including bloom (R1)

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# Liberty<sup>®</sup> ULTRA Herbicide

## Broadleaf & Grass Weed Control

### Still Better than Tested Generic Competitors

Portageville, MO

Application: 8.19.24

Photo: 8.23.24

Andrea Smith



**Untreated**



**Generic 32 fl oz/A**



**Liberty Ultra 24 fl oz/A**

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**■ BASF**  
We create chemistry



# Liberty® ULTRA Herbicide

## ESA Implications and Requirements

- The EPA will now evaluate **ALL** new (a.i. and reregistration) herbicide registrations according to the framework designated by the ESA Strategy by product and field
- Two main decisions:
  1. Runoff mitigation measures (0-9 point scale) – Field Based
  2. Drift mitigation buffers (0-230 ft) – Product based

# Liberty® ULTRA Herbicide

## ESA Implications and Requirements

Liberty ULTRA will require

**3 runoff mitigation points**

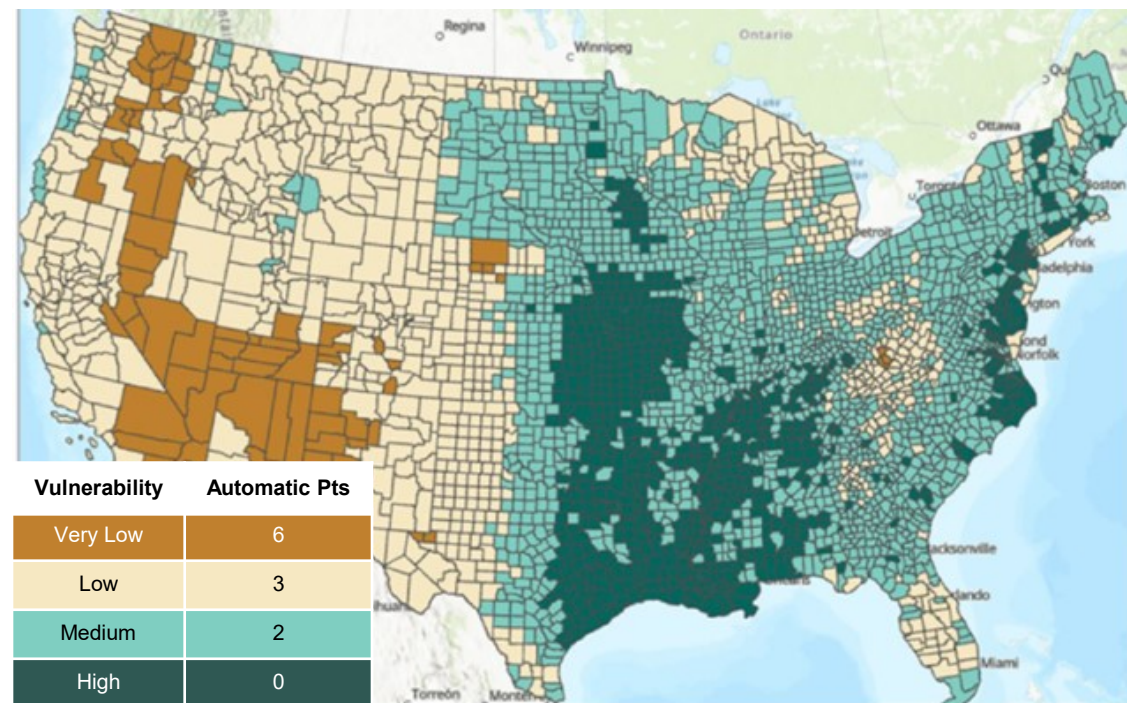
Measures to earn mitigation points:

- Start with county mitigation relief points
- Non-irrigated field **3 points**
- Field with slope  $\leq 3\%$  **2 points**
- Reduced Tillage **2 points**
- Constructed/Natural Wetlands **3 points**
- Cover crop\* **1-3 points**
- Keeping record of mitigation efforts **1 point**

\*Depending on tillage and if it is a short- or long-term cover crop

For most up to date information on EPA policy regarding Endangered and Threatened Species refer to <https://www.epa.gov/pesticides/bulletins> and Mandatory Runoff Mitigation <https://www.epa.gov/pesticides/mitigation-menu>.

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# Liberty® ULTRA Herbicide Stewardship

## Preserve Glufosinate; Use START Guidelines for Success



Liberty ULTRA Herbicide  
+ Outlook® Herbicide + AMS POST

S

### SIZE

Spray <3" weeds.

T

### TIMING

Time of day and environmental conditions at application influence knockdown performance.

A

### AMMONIUM SULFATE (AMS)

Critical for driving optimum efficacy with Liberty ULTRA herbicide.

R

### RATE & RESIDUALS

Use an effective rate of Liberty ULTRA herbicide as well as residual herbicides (PRE and POST) to set up Liberty ULTRA herbicide for success.

T

### TWENTY & TIPS

Liberty ULTRA is a contact herbicide and coverage is key. Use 20 GPA and medium to coarse droplets to get product on target.

BASF Sponsored Plot, Rowher, AR 2024.

PRE: Warrant, POST: Liberty ULTRA herbicide @ 24 fl oz/A + Outlook herbicide + glyphosate, 3# AMS.

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# Revylok® Fungicide

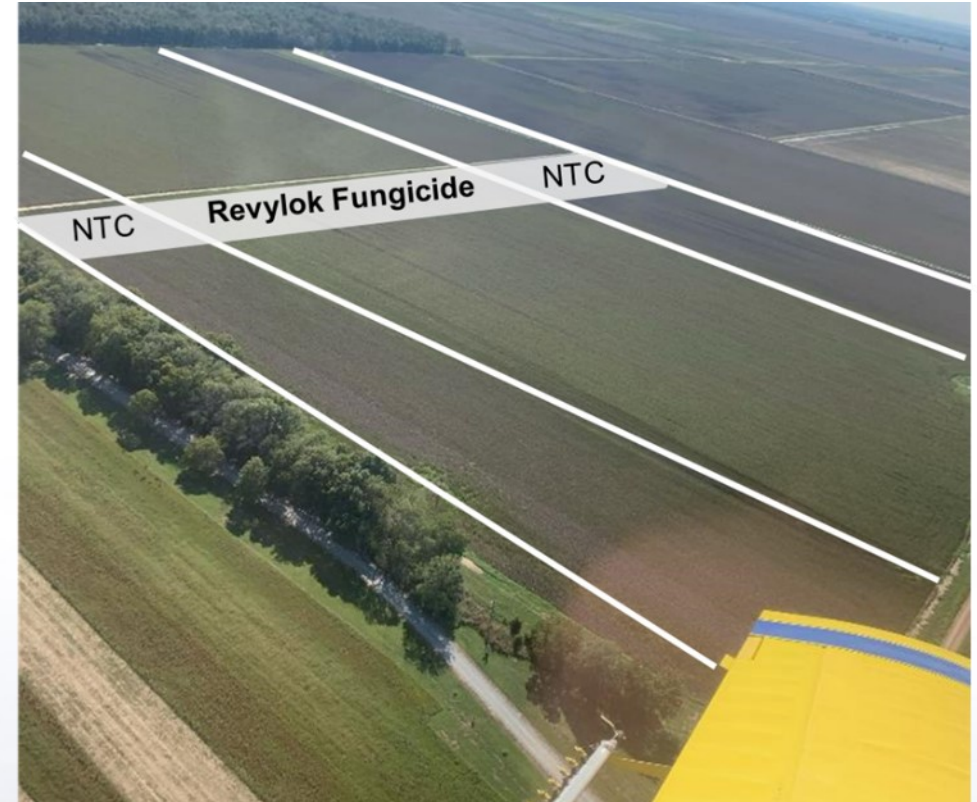
## Best Use Recommendations

### Application Tips

- **Use Rate:** 5.5–6.5 fl oz/A
- **Timing:** R2–R3 growth stage
- **Rainfast:** When dry
- **Adjuvant:** Can be used to improve coverage
- **Nozzle, Droplet Size:** Flat fan, medium or coarse
- **Tank Mixing\*:** May be tank mixed with other products

### Active Ingredients

- Mefentrifluconazole (Group 3)
- Fluxapyroxad (Group 7)



\*Before mixing components, always conduct a compatibility jar test. Always consult respective product labels for specific mixing instructions. The most restrictive label applies. BASF sponsored on-farm trial in Bolivar Co., MS, 2024. Revylok fungicide applied at 5.5 fl. oz/A. All treatments applied with NIS 0.25% v/v at R2-R3 Timing. Application made on August 6th, 2024. Photos taken on August 20th, 2024.

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