

# SPECIMEN

# **Liberty® ULTRA**

Herbicide – Powered by Glu-L™ Technology

Liberty® ULTRA herbicide — Powered by Glu-L™ Technology is a nonselective herbicide that provides control of a broad spectrum of broadleaf and grassy weeds in LibertyLink or glufosinate-resistant crops.

### **Active Ingredient:**

Glufosinate-P-Ammonium*	18.7%**
Other Ingredients:	81.3%
Total:	100.0%

<sup>\*</sup> CAS Number 73777-50-1

EPA Reg. No. 7969-500

**EPA Est. No.** 

# DANGER/PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See full label for complete First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty, and state-specific crop and/or use site restrictions. In case of an emergency endangering life or property involving this product,

# **Net Contents:**

Recirculation is advised for bulk tanks for totes

call day or night 1-800-832-HELP (4357).

BASF Corporation 26 Davis Drive, Research Triangle Park, NC 27709

<sup>\*\*</sup> Equivalent to 1.76 pounds of active ingredient per U.S. gallon; equivalent to 1.61 pounds per U.S. gallon acid equivalent, as glufosinate-P.

#### 1.0 FIRST AID

	FIRST AID
If in eyes	<ul> <li>Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>DO NOT induce vomiting unless told to by a poison control center or doctor.</li> <li>DO NOT give anything by mouth to an unconscious person.</li> </ul>
If on skin	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
	LIGHT INF NUMBER

#### **HOTLINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For medical emergency treatment, call BASF Corporation: 1-800-832-HELP (4357) or 1-800-222-1222. For non-emergency information on this product, call 1-800-832-HELP (4357) or the National Pesticides Information Center (NPIC) at 1-800-858-7378.

**NOTE TO PHYSICIAN:** If this product is ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal and sodium sulfate administration. Probable mucosal damage may contraindicate the use of gastric lavage. Additionally, call 1-800-832-HELP (4357) immediately for further information.

#### 2.0 PRECAUTIONARY STATEMENTS

#### 2.1 Hazards to Humans and Domestic Animals

**DANGER: Corrosive.** Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. **DO NOT** get in eyes or on clothing. Avoid contact with skin. Wear goggles, face shield or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Wear long-sleeved shirt and long pangs, socks, shoes, and chemical-resistant gloves. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin or clothing. Avoid breathing spray mist.

#### 2.2 Personal Protective Equipment (PPE)

#### Applicators and other handlers must wear:

- Long-sleeve shirt and long pants
- Chemical-resistant gloves including barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils
- Shoes and socks
- Protective eyewear (goggles, face shield or safety glasses)

Mixers/loaders supporting aerial applications to canola, corn, cotton, and soybean must use closed mixing/loading systems.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

# 2.2.1 User Safety Requirements

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

# 2.2.2 Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### 2.2.3 USER SAFETY RECOMMENDATIONS

#### **USER SAFETY RECOMMENDATIONS**

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### 2.3 Environmental Hazards

# 2.3.1 Surface Water Advisory

**DO NOT** apply directly to water or to areas where surface water is present. **DO NOT** apply to intertidal areas below the mean high water mark. **DO NOT** contaminate water by cleaning of equipment or disposal of equipment washwater or rinsate.

This pesticide is toxic to vascular plants and needs to be used strictly in accordance with the drift and runoff precautions on this label in order to minimize off-site exposures.

Under some conditions, this product may have a potential to run off to surface water or adjacent land. Where possible, use methods which reduce soil erosion, including no till, limited till and contour plowing; these methods also reduce pesticide runoff.

# 2.3.2 Pollinator Advisory Statement

This product contains a herbicide. Follow all label directions and precautions to minimize potential off-target exposure in order to prevent effects to non-target plants adjacent to the treated site which may serve as habitat or forage for pollinators.

#### 3.0 DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

**DO NOT** use this product until you have read the entire label. **DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

In the State of Hawaii and territory of Puerto Rico, use only allowed for corn, cotton and soybean seed production/propagation (**LibertyLink®** or glufosinate-tolerant and conventional), including seed increase.

In the State of **New York** Only: Not For Use In Nassau and Suffolk Counties.

#### 4.0 AGRICULTURAL USE REQUIREMENTS

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses; and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls worn over short-sleeve shirt and short pants
- Chemical-resistant gloves including barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils
- Chemical-resistant footwear plus socks
- Protective eyewear (goggles, face shield or safety glasses)

#### 5.0 STORAGE AND DISPOSAL

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

#### **Pesticide Storage**

**DO NOT** use or store near heat or open flame. Keep the container tightly closed and dry in a cool, well-ventilated place. Storage temperature must not exceed 125° F. If storage temperature for bulk **Liberty® ULTRA herbicide** — **Powered by Glu-L<sup>TM</sup> Technology** is below 32° F, the material must not be pumped until its temperature exceeds 32° F. Protect against direct sunlight.

For containers larger than 2.5 gallons, periodic recirculation is advised during long term storage and prior to use or dispersement.

# **Pesticide Disposal**

Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

# **Container Handling**

Rigid nonrefillable containers small enough to shake (i.e., containers with capacities equal to or less than 5 gallons)

**Nonrefillable Container. DO NOT** reuse or refill this container. Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Once container is rinsed, then offer for recycling if available or reconditioning if appropriate; or puncture and dispose of in a sanitary landfill, or by incineration; or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

# All refillable container types (containers with capacities greater than 50 lbs)

**Refillable Container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. This is a sealed returnable container to be used only for **Liberty ULTRA**. When this container is empty, it must not be opened, cleaned, or discarded. Empty containers must be returned to the original purchase location.

Bottom discharge Intermediate Bulk Container (IBC) (containers with capacities greater than 50 lbs) Refillable Container. Refill this container with pesticide only. DO NOT reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. Empty the remaining contents from the Intermediate Bulk Container (IBC) into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely remove the top lid of the IBC. Use water pressurized to at least 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve. Contact your Ag retailer or BASF for container return, disposal, and recycling recommendations.

#### **6.0 PRODUCT INFORMATION**

# 6.1 Important Crop Safety Information

#### **READ BEFORE USING THIS PRODUCT**

**Liberty® ULTRA herbicide** — **Powered by Glu-L™ Technology** may be applied as:

- as a burndown treatment prior to planting, prior to emergence or postharvest of canola, field corn, sweet corn, cotton, and soybean
- in seed propagation for canola, field corn, cotton, and soybean
- as a postemergence weed control herbicide to be applied on LibertyLink® or glufosinate-resistant crops including LibertyLink canola, LibertyLink field corn, LibertyLink sweet corn, LibertyLink cotton, and LibertyLink soybeans
- as postemergence weed control herbicide to be applied in cotton with a hooded sprayer only

**Postemergence row crop applications** of **Liberty ULTRA** may be made only to crops resistant to glufosinate-ammonium or glufosinate-P-ammonium. BASF does not warrant the use of this product on crops other than those designated as **LibertyLink** to safely withstand the application of **Liberty ULTRA** to the extent consistent with applicable law.

The basis of selectivity of **Liberty ULTRA** in crops is the presence of a gene in **LibertyLink** crops which results in a plant that is resistant to Glufosinate-P-Ammonium, the active ingredient of **Liberty ULTRA**. Crops not containing this gene will not be resistant to **Liberty ULTRA** and severe crop injury and/or death may occur. **DO NOT** allow spray to contact foliage or green tissue of desirable vegetation other than crops resistant to the active ingredient in this product.

**Liberty ULTRA** may be applied to conventional or other transgenic cotton not resistant to the active ingredient in **Liberty ULTRA** using a hooded sprayer.

**Liberty ULTRA** is a water-soluble nonselective herbicide for application as a foliar spray for the control of a broad spectrum of emerged broadleaf and grassy weeds.

**Liberty ULTRA** is only foliar-active with little or no activity in soil. Only weeds that are emerged at the time of application will be controlled by **Liberty ULTRA**.

- Apply to actively growing small weeds as specified in the **Weeds Controlled** section.
- Liberty ULTRA is a contact herbicide and requires uniform, thorough spray coverage.
- Warm temperatures, high humidity, and bright sunlight improve the performance of Liberty ULTRA.
- Necrosis of leaves and young shoots occurs within 2 to 4 days after application under good growing conditions.
- **Liberty ULTRA** is rainfast four (4) hours after application to most weed species; therefore, rainfall within four (4) hours may necessitate retreatment or may result in reduced weed control. Refer to specific use sections of this label for minimum intervals required before re-application of this product and use rates.
- **Liberty ULTRA** requires sunlight for activity. Applications near dawn and dusk may result in reduced weed control. For best results, make applications between sunrise and 2 hours before sunset.
- Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness.

To maximize weed control, **DO NOT** cultivate from 5 days before an application to 7 days after an application.

• Consult your local Cooperative Extension Service or BASF representative for guidelines on the optimum application timing for **Liberty ULTRA** in your region.

# **6.2 Weed Resistance Management Practices**

**Liberty® ULTRA herbicide** — **Powered by Glu-L™ Technology** is a **Group 10** herbicide, i.e., a glutamine synthetase inhibitor. A given weed population may contain or develop resistance to a herbicide after repeated use. Appropriate resistance management strategies should be followed to mitigate or delay resistance. The following integrated weed management techniques are effective in reducing problems with herbicide resistant weed biotypes. It is best to use multiple practices to manage or delay resistance, as no single strategy is likely to be totally effective.

Contact your local BASF representative, crop advisor or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions.

Fields should be scouted prior to application to identify the weed species present and the growth to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective.

Suspected herbicide-resistant weeds may be identified by these indicators:

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; and surviving plants mixed with controlled individuals of the same species.

Report an incidence of non-performance of this product against a particular weed species to your local extension specialists, certified crop advisor and/or BASF representative.

- Rotate crops Crop rotation diversifies weed management.
- Rotate herbicide-resistant traits Alternate herbicide-resistant (HR) traits and/or use HR trait stacks for more efficient rotation.
- **Use multiple herbicide sites of action** Use tank mix partners and multiple sites of action during both the growing season and from year to year to reduce the selection pressure of a single site of action.
- **Know your weeds. Know your fields** Closely monitor problematic areas with difficult-to-control weeds or dense weed populations.
- Start with clean fields Effective tillage or the use of a burndown herbicide program can control emerged weeds prior to planting.
- Stay clean. Use residual herbicides Regardless of tillage system, preemergence or early postemergence soil-applied residual herbicides should be used when possible.
- **Apply herbicides correctly** Ensure proper application, including timing, full use rates and appropriate spray volumes.
- **Control weed escapes** Consider using an herbicide with an alternative mechanism of action through broadcasting, spot treatment, and row wicking or non-chemical means to control escaped weeds such as hand removal of weeds or other techniques to stop weed seed production and improve weed management.
- Zero tolerance. Reduce the seed bank DO NOT allow surviving weeds to set seed, which will help decrease weed populations from year to year and prevent major weed shifts.
- Clean equipment Prevent the spread of herbicide-resistant weeds and their seeds.
- Manage borders. Prevent an influx of weeds into the field by managing borders.
- Scout fields before and after application.
- **Diversified approach.** To the extent possible, use a diversified approach towards weed management. Whenever possible, incorporate multiple weed-control practices including mechanical cultivation, biological management practices or crop rotation.

Contact your local extension specialist, certified crop advisory and/or BASF representative for additional resistance management or IPM recommendation. Also for more information on weed resistance management, visit the Herbicide Resistance Action Committee (HRAC) on the web at http://www.hracglobal.com.

#### 7.0 MIXING INSTRUCTIONS

# 7.1 Mixing Instructions for Liberty® ULTRA herbicide — Powered by Glu-L™ Technology

- 1. Start with properly calibrated and clean equipment.
- 2. Fill the spray tank half full with water.
- 3. Start agitation.
- 4. If mixing with a flowable/wettable powder tank mix partner, prepare a slurry of the proper amount of the product in a small amount of water. Add the slurry to the spray tank.
- 5. Add ammonium sulfate (AMS) to the spray tank if needed.
- 6. If mixing with a liquid tank mix partner, add the liquid mix partner next.
- 7. Complete filling the spray tank with water before adding **Liberty ULTRA**, as foaming may occur.
- 8. Add **Liberty ULTRA** when tank is full and continue agitation.
- 9. If foaming occurs, use a silicone-based anti-foam agent.

Ensure that all spray system lines including pipes, booms, etc. have the correct concentration of spray solution by flushing out the spray system lines before starting the crop application.

If tank mix partners listed on this label are added, maintain thorough agitation at all times until contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed. Keep bypass line on or near bottom of tank to minimize foaming. Screen size in nozzles or line strainers must be 50 mesh or larger.

# 7.2 Compatibility Testing

If **Liberty ULTRA** is to be mixed with pesticide products not listed on this label, test the compatibility of the intended tank mixture prior to mixing the products in the spray tank. The following procedure assumes a spray volume of 25 gallons per acre. For other spray volumes, adjust the amount of the water used accordingly. Check compatibility as follows:

- 1. Place 1.0 pint of water from the source that will be used to prepare the spray solution in a clear 1-quart jar.
- 2. For each pound of a dry tank mix partner to be applied per acre, add 1.5 teaspoons to the jar.
- 3. For each 16 fl ozs of a liquid tank mix partner to be applied per acre, add 0.5 teaspoon to the jar.
- 4. For each 16 fl ozs of **Liberty ULTRA** to be applied per acre, add 0.5 teaspoon to the jar.
- 5. After adding all the ingredients, place a lid on the jar and tighten. Invert 10 times to mix.
- 6. Let the mixture stand for 15 minutes and evaluate the solution for uniformity and stability. Look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. If the tank mix partners are not compatible, **DO NOT** use the mixture in a spray tank.
- 7. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the **STORAGE AND DISPOSAL** section of this label.

**Liberty ULTRA** is formulated to mix readily in water. Prior to adding **Liberty ULTRA** to the spray tank, ensure that the spray tank is thoroughly clean, particularly if a herbicide with the potential to injure crops was previously used (see **Cleaning Instructions**). It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and precautions and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Tank Mix Instructions. Liberty ULTRA** may be applied in tank mix combinations with labeled rates of other products provided these other products are labeled for the timing and method of application for the crop to be treated. The tank mix partner must be used in accordance with the label restrictions and precautions. **DO NOT** exceed label dosage rates. **Liberty ULTRA** cannot be mixed with any product containing a label prohibition against such mixing. Refer to the specific crop section for rates and other restrictions.

#### 7.3 Tank Mixing

**Liberty ULTRA** does not provide residual weed control or control of unexposed plant parts. Certain herbicide tank mixes may aid in the performance of **Liberty ULTRA** or be added to provide residual herbicide activity. No additional surfactant is needed with any tank mix partner. **Liberty ULTRA** may be applied in tank mix combinations with labeled rates of other products provided these other products are labeled for the timing and method of application for the crop to be treated. The tank mix partner must be used in accordance with the label restrictions and precautions. **DO NOT** exceed label dosage rates.

Liberty ULTRA cannot be mixed with any product containing a label prohibition against such mixing.

# 7.4 Cleaning Instructions

#### Prior To Liberty® ULTRA herbicide — Powered by Glu-L™ Technology Use

Before using **Liberty ULTRA**, thoroughly clean bulk storage tank, refillable tank, nurse tanks, spray tank, lines, and filter particularly if a herbicide with the potential to injure crops was previously used. Equipment must be thoroughly rinsed using a commercial tank cleaner and as instructed on the prior herbicide label.

#### **After Liberty ULTRA Use**

After using **Liberty ULTRA**, triple rinse the spray equipment and clean with a commercial tank cleaner before using the equipment for a new application. Make sure any rinsate or foam is thoroughly removed from spray tank and boom. Rinsate may be disposed following the pesticide disposal directions on this label.

#### 8.0 APPLICATION INSTRUCTIONS

Uniform, thorough spray coverage is important to achieve consistent weed control with Liberty ULTRA.

# 8.1 Ground Application

- Apply early when weeds are small as identified in the **Weeds Controlled** section.
- Apply Liberty ULTRA in a minimum of 15 gallons of water per acre. Increase to 20 gallons of water per acre for better coverage of large weeds, dense foliage, or when using larger spray droplets.

#### 8.2 Nozzle Selection

Apply with nozzles and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1 unless otherwise mandated by tank mix product.

Addition of some drift retardants can significantly increase the droplet size and reduce spray coverage and efficacy. If a drift retardant is used, ensure that it is compatible for use with **Liberty ULTRA** and spray equipment being used.

# 8.3 Aerial Application

- Apply early when weeds are small as identified in the Weeds Controlled section.
- Apply **Liberty ULTRA** in a minimum of 10 gallons of water per acre.
- See the Spray Drift Management section of this label for additional information on proper application of Liberty ULTRA.

#### 8.4 Adjuvant Instructions

- Ammonium sulfate (AMS) can be used at 1.5 lbs/A to 3 lbs/A. Rates are dependent on tank mix partners, environmental conditions, temperatures and potential for leaf burn.
- AMS has shown to improve weed control of difficult-to-control weeds, like velvetleaf and lambsquarters, under difficult environmental conditions (low relative humidity) or hard water.
- Anti-foam agent is advised.
- No additional surfactant is needed with any tank mix partner.

The use of additional surfactants or crop oils may increase the risk of crop response. Please refer to the surfactant label for more detailed information.

#### 9.0 MANDATORY SPRAY DRIFT MANAGEMENT

#### 9.1 MANDATORY SPRAY DRIFT MITIGATIONS

#### 9.1.1 For Aerial and Ground Boom Applications:

- DO NOT apply when wind speeds exceed 15 miles per hour at the application site.
- Select nozzle and pressure that deliver medium or coarser spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers standards 572.1 and 641 (ASABE S572 and S641).
- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes) must register between 3 and 15 miles per hour.
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- **DO NOT** apply during temperature inversions.

# 9.1.2 For Aerial Applications:

- When applying to crops via aerial application equipment, the spray boom must be mounted on the aircraft to minimize drift caused by wing tip or rotor blade vortices.
- Wind speed and direction must be measured on location using a windsock, an anemometer (including systems to measure wind speed or velocity on an aircraft), or an aircraft smoke system.
- When the wind speed is between 11 to 15 miles per hour, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- When the wind speed is between 11 to 15 miles per hour, applicators must use a minimum of 3/4 swath displacement upwind at the downwind edge of the field. Otherwise, applicators must use a minimum of 1/2 swath displacement upwind at the downwind edge of the field.
- **DO NOT** release spray at a height greater than 10 ft above the crop canopy unless a greater application height is required for pilot safety.

# 9.1.3 For Ground Boom Application:

- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT**exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective
  height over the target pest or crop canopy based on equipment manufacturer's directions.
- Wind speed and direction must be measured on location using a windsock or anemometer (including systems to measure wind speed or velocity using application equipment).

# 9.2 Mandatory Spray Drift Buffers

# 9.2.1 For aerial and ground applications, maintain a downwind buffer between the last spray row and the protection area as follows:

Application Method	Droplet Size Distribution (DSD)	Minimum Buffer Distance
Aerial	medium	50 ft
Ground	medium to coarser	10 ft

Protection areas include all areas with the following exceptions which can be included in the buffer footage, provided that people are not present within the application exclusion zone during the application, and they will not be contacted by the pesticide, either directly or through drift (see 40 CFR 170.405(a) and 40 CFR 170.505(a)):

- Agricultural fields, including untreated portions of the treated field.
- Roads, paved or gravel surfaces, mowed grassy areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area.
- Buildings and their perimeters, silos, or other man-made structures with walls and/or roof.
- Areas maintained as a mitigation measure for runoff/erosion or drift control, such as vegetative filter strips (VFS), field borders, hedgerows, Conservation Reserve Program lands (CRP), and other mitigation measures identified by EPA on the mitigation menu.<sup>1</sup>
- Managed wetlands including constructed wetlands on the farm.
- On-farm contained irrigation water resources that are not connected to adjacent water bodies, including on-farm irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, and tailwater collection ponds.

Growers must ensure that pesticide use does not cause degradation of the CRP habitat.

### 9.2.2 Aerial Spray Drift Buffer Reduction Options:

- A 20% (i.e., 10-foot) reduction in the required wind-directional buffer distance can be made if the applicator selects a nozzle and pressure that deliver coarse or coarser droplets in accordance with ASABE S572.
- A 35% (i.e., 18-foot) reduction can be made if the applicator selects a nozzle and pressure that delivers coarse droplets and uses an oil emulsion drift reducing adjuvant that constitutes 2.5% of the volume of the finished spray tank mix.
- A reduction in the required wind-directional buffer distance can be made if a windbreak or shelterbelt (e.g., trees or riparian hedgerows) between the application site and non-managed area is present and meets the criteria listed in the **Windbreak-Shelterbelt Criteria** section of this label. The reduction is 50% (i.e., 25 feet) if the windbreak or shelterbelt meets the basic windbreak-shelterbelt criteria and is 75% (i.e., 38 feet) if the windbreak or shelterbelt meets the advanced windbreak-shelterbelt criteria.
- The percent reduction in wind-directional buffer distances may be added if you use one droplet size buffer reduction option (coarse or coarse with an oil emulsion drift reducing adjuvant that constitutes 2.5% of the volume of the finished spray tank mix) and one windbreak-shelterbelt option (basic or advanced). The maximum buffer reduction that can be achieved by a combination of buffer reduction options is 100% (i.e., no drift buffer).

# 9.2.3 Ground Boom Spray Drift Buffer Reduction Options:

Any of the following options can reduce the ground buffer distance to 0 feet:

- Use of an oil emulsion drift reducing adjuvant that constitutes 2.5% of the volume of the finished spray tank mix.
- Application is made using an over-the-top hooded sprayer, as a layby application, or is made below the crop canopy using drop nozzles.
- Use of a row-middle hooded sprayer.
- If a windbreak or shelterbelt (e.g., trees or riparian hedgerows) between the application site and non-managed area is present and meets the criteria listed in the **Windbreak-Shelterbelt Criteria** section of this label.

### 9.3 Windbreak-Shelterbelt Criteria

Both basic and advanced windbreaks or shelterbelts (e.g., trees or riparian hedgerows) between the application site and non-managed area must be present and meet the following criteria for 50% and 75% wind-directional buffer distance reductions, respectively:

- The windbreak or shelterbelt must be downwind between the pesticide application and the non-managed area.
- The windbreak or shelterbelt must run the full length of the treated area with no significant breaks in the vegetation.
- The windbreak or shelterbelt foliage must be sufficiently dense such that the non-managed area is not visible from the upwind side at the time of application.
- The windbreak or shelterbelt must be planted according to local/regional/federal conservation program standards; however, no state or federally listed noxious or invasive trees or shrubs should be planted.
- The windbreak or shelterbelt must be maintained such that their functionality is not compromised.
- For basic windbreaks (50% reduction)
  - The height of the trees in the windbreak or shelterbelt must be at the same height or above the release height of the application.
  - The windbreak must have a minimum of one row of trees and/or shrubs or a 4-foot-wide strip of non-woody vegetation.
- A semi-permeable manmade structure, curtain, or netting that is raised prior to application can be used instead of a windbreak or shelterbelt. This structure must be downwind between the pesticide application and the nonmanaged area, cover the entire distance of field adjacent to non-managed area, and at the same height or higher as the release height of the application.
- For advanced windbreak-shelterbelt (75% reduction)
  - The height of the trees in the windbreak or shelterbelt must be at a height that is at least twice as high as the release height of the application.
  - The windbreak or shelterbelt must have a minimum of two or more rows of trees and/or shrubs with a mixture of vegetation types (e.g., trees, shrubs, herbs), or that have 8 or more feet of depth for herbaceous (nonwoody) vegetation.
  - A semi-permeable manmade structure, curtain, or netting that is raised prior to application can be used instead of a windbreak or shelterbelt. This structure must be downwind between the pesticide application and the nonmanaged area, cover the entire distance of field adjacent to non-managed area, and at a height that is at least twice as high as the release height of the application.

See ADDITIONAL SPRAY DRIFT INFORMATION section below for more details.

#### 10.0 ADDITIONAL SPRAY DRIFT INFORMATION:

This section is intended to provide additional information for applicators to assist in implementing the mandatory spray drift mitigations above. THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

### 10.1 Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Consider the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### 10.2 Controlling Droplet Size - Ground Boom

- **Volume** Increasing the spray volume so that larger droplets are produced will reduce spray drift. Consider using the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- **Pressure** Using the lowest spray pressure recommended for the nozzle will produce the target spray volume and droplet size.
- **Spray Nozzle** Consider using a spray nozzle that is designed for the intended application, as well as using nozzles designed to reduce drift.

# 10.3 Controlling Droplet Size - Aircraft

• **Adjust Nozzles** - Applicators should follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

# 10.4 Release Height - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

# 10.5 Release Height - Aircraft

Higher release heights increase the potential for spray drift.

# 10.6 Hooded (or Shielded) Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded sprayers. Applicators should verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### 10.7 Temperature and Humidity

When making applications in hot and dry conditions, consider using larger droplets to reduce effects of evaporation.

#### **10.8 Temperature Inversions**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

#### 10.9 Wind

Drift potential generally increases with wind speed.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

# 10.10 Measuring Wind Speed and Wind Direction

Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the applicable thresholds.

- Applicators should reassess wind speed and direction at the application site every 15 minutes while applications are in progress.
- Measuring wind speed and direction can be done by:
  - Relying on equipment on the application equipment that measures wind speed (e.g., aerial equipment).
  - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop every

15 minutes to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.

- Using a windsock. Wind can be estimated with a windsock using the strips on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every 15 minutes to estimate wind speed and direction. The windsock should be pointed in the opposite direction of the windbreak and the non-managed area.
- Using an aircraft smoke system. Laying down several puffs of smoke along different lines using an aircraft smoke system can provide an accurate view of what the wind speed and direction for the application.
- Checking behind the spray rig at least every 15 minutes to see if the spray has changed direction from when the application started.

#### 11.0 MANDATORY RUNOFF MITIGATION:

- **DO NOT** apply when soils are saturated or above field capacity.
- **DO NOT** apply during rain.

You must achieve a minimum of three points for the crop uses listed on this label unless otherwise stipulated below. Applicators must access and search Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins within six months of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA) that has a Bulletin in BLT. If you are located inside a PULA, follow the instructions in the bulletin.

If the application site is located outside a PULA, runoff/erosion mitigation is required for this product unless certain field/application parameters are present at the time of application (i.e., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc). Access EPA's Mitigation Menu Website at www.epa.gov/pesticides/mitigation-menu for a full list of field/application parameters to evaluate whether your field is subject to runoff/erosion mitigation.

If the application does not meet the specified field/application parameters, a minimum of three points for the crop uses listed on this label must be achieved. The applicator must choose among the mitigation and/or mitigation relief measures on EPA's Mitigation Menu Website to meet or exceed these points before applying this product. The website includes the full menu of runoff/erosion mitigation and mitigation relief measures. The following are examples:

- Location in a very low, low, or medium runoff vulnerability county
- Field slope
- Soil incorporation
- Conservation tillage
- Vegetative strips
- Cover crop or continuous ground cover
- Irrigation water management
- Mulchina
- Grassed waterway
- Vegetated ditch
- Constructed and natural wetlands
- Water retention systems
- Following recommendations from a runoff/erosion specialist or participating in a qualifying conservation program (see the www.epa.gov/pesticides/mitigation-menu for minimum elements).

To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:

- Employed in accordance with the instructions and descriptions on EPA's Mitigation Menu Website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's Mitigation Menu Website.
- EPA may periodically update the Mitigation Menu Website, for example, by adding new mitigation measures or updating a mitigation measure description.

#### 12.0 ENDANGERED AND THREATENED SPECIES PROTECTION REQUIREMENTS

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins (Bulletins) within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its

labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

# 13.0 GENERAL USE RESTRICTIONS (ALL CROPS)

# 13.1 Application Restrictions

- These restrictions are in addition to the crop specific restrictions.
- DO NOT apply when winds are gusty or when conditions will favor movement of spray particles off the
  desired spray target. See the Spray Drift Management section of this label for additional information on
  proper application of Liberty® ULTRA herbicide Powered by Glu-L<sup>TM</sup> Technology.
- DO NOT use flood jet nozzles, controlled droplet application equipment, or air-assisted spray equipment.
- DO NOT apply Liberty ULTRA when soils are saturated or above field capacity.
- DO NOT apply Liberty ULTRA during rain.
- DO NOT apply using chemigation.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply aerially in non-glufosinate resistant crops.
- **DO NOT** apply more than the **combined maximum annual total** for both active ingredients when glufosinate ammonium and glufosinate-P-ammonium are used on the crop in the same year.

#### 14.0 APPLICATION RATE AND WEEDS CONTROLLED

# 14.1 Use Rate Equivalency Table

Use the Use Rate Equivalency table to determine the corresponding amounts of active ingredient (glufosinate) from **Liberty ULTRA** product use rates.

### Use Rate Equivalency for Liberty ULTRA (1.76 lbs ai/gal)

Amount of Liberty ULTRA (fl ozs/A)	Amount of L-glufosinate- ammonium (lb ai/A)	Amount of L-glufosinate- ammonium (lb ae/A)	Glufosinate- Ammonium Equivalent (lbs)
14.7	0.20	0.18	0.40
15	0.21	0.19	0.41
16	0.22	0.20	0.44
16.5	0.23	0.21	0.45
19	0.26	0.24	0.52
20	0.28	0.25	0.55
21	0.29	0.26	0.58
22	0.30	0.28	0.61
24	0.33	0.30	0.66
25	0.34	0.31	0.69
27	0.37	0.34	0.74
29	0.40	0.36	0.80
30	0.41	0.38	0.83
32	0.44	0.40	0.88
39	0.54	0.49	1.07
55	0.76	0.69	1.51
58	0.80	0.73	1.59

#### 14.2 Weeds Controlled Not registered for use by California

For best results, apply to emerged, small and actively growing weeds less than 3 inches in height. Warm temperatures, high humidity, and bright sunlight improve the performance of **Liberty ULTRA**. Uniform, thorough spray coverage of weeds is necessary to achieve consistent weed control. Refer to the **Application Equipment** section for more details.

Weed control may be reduced when applications are made to weeds under stress including drought or cool temperatures and in dense populations. Stressed conditions may also include prior treatments of other contact or systemic herbicides. Regrowth of weeds may occur due to the weed stage of growth at application, use rate, or environmental conditions at the time of application.

When any of these conditions exist, select a higher rate within the label rate range to improve weed control.

Weeds Controlled at 14.7 to 21 fl ozs/A (0.20 to 0.29 lb ai/A)		
Broadleaf Weeds		
Common Name	Scientific Name	
Anoda, spurred	Anoda cristata	
Beggarweed, Florida	Desmodium tortuosum	
Black medic	Medicago lupulina L.	
Blueweed, Texas	Helianthus ciliaris DC.	
Buckwheat, wild	Polygonum convolvulus	
Buffalobur	Solanum cornutum	
Burcucumber	Sicyos angulatus	
Canola, volunteer <sup>1</sup>	Brassica spp.	
Carpetweed	Mollugo verticillata	
Catchweed bedstraw (cleavers)	Galium aparine L.	
Chickweed, common	Stellaria media	
Cocklebur, common	Xanthium strumarium	
Copperleaf, hophornbeam	Acalypha ostryaefolia	
Cotton, volunteer <sup>1</sup>	Gossypium spp.	
Croton, tropic	Croton glandulosus	
Croton, woolly	Croton capitatus	
Devil's claw	Proboscidea louisiana	
Eclipta	Eclipta alba	
Fleabane, annual	Erigeron annuus	
Galinsoga, hairy	Galinsoga ciliate	
Galinsoga, smallflower	Galinsoga parviflora	
Geranium, cutleaf	Geranium dissectum L.	
Groundcherry, cutleaf	Physalis angulata	
Hempnettle	Galeopsis spp.	
Horsenettle, Carolina <sup>2</sup>	Solanum carolinense	
Jimsonweed	Datura stramonium	
Knotweed	Polygonum spp.	
Ladysthumb	Polygonum persicaria	
Lambsquarters, common	Chenopodium album	
Mallow, common	Malva spp.	
Mallow, Venice	Hibiscus trionum	
Marsh elder, annual	Iva annua	
Morningglory, entireleaf	Ipomoea hederacea var. integriuscula	
Morningglory, ivyleaf	Ipomoea hederacea	
Morningglory, pitted	Ipomoea lacunosa	
Morningglory, sharppod	Ipomoea cordatotriloba	
Morningglory, smallflower	Jacquemontia tamnifolia	
Morningglory, tall	Ipomoea purpurea	
Mustard, wild	Sinapis arvensis	

(continued)

Nightshade, black Nightshade, eastern black Sola Nightshade, hairy Sola Pennycress Thla Pigweed, prostrate Pigweed, redroot Pigweed, smooth Pigweed, spiny Pigweed, tumble Puncturevine Purslane, common Ragweed, common Ragweed, giant Senna, coffee Sesbania, hemp Sola Sola Sola Sola Sola Sola Sola Sola	ientific Name  lanum nigrum  lanum ptycanthum  lanum sarrachoides laspi arvense laranthus blitoides laranthus retroflexus laranthus hybridus laranthus spinosus laranthus albus laranthus terrestris	
Nightshade, black Nightshade, eastern black Sola Nightshade, hairy Sola Pennycress Thla Pigweed, prostrate Pigweed, redroot Pigweed, smooth Pigweed, spiny Pigweed, tumble Puncturevine Purslane, common Ragweed, common Ragweed, giant Senna, coffee Sesbania, hemp Sola Sola Sola Sola Sola Sola Sola Sola	lanum nigrum lanum ptycanthum lanum sarrachoides laspi arvense naranthus blitoides naranthus retroflexus naranthus hybridus naranthus spinosus	
Nightshade, eastern black  Nightshade, hairy  Pennycress  Thia  Pigweed, prostrate  Pigweed, redroot  Pigweed, smooth  Pigweed, spiny  Pigweed, tumble  Puncturevine  Purslane, common  Ragweed, common  Ragweed, giant  Senna, coffee  Sesbania, hemp  Sola	lanum ptycanthum lanum sarrachoides laspi arvense laranthus blitoides laranthus retroflexus laranthus hybridus laranthus spinosus laranthus albus	
Nightshade, hairy  Pennycress  Thla  Pigweed, prostrate  Pigweed, redroot  Pigweed, smooth  Pigweed, spiny  Pigweed, tumble  Puncturevine  Purslane, common  Ragweed, common  Ragweed, giant  Senna, coffee  Sesbania, hemp  Sola  Sola  Sola  Sola  Sola  Sola  Sola  Ama  Ama  Ama  Sola  Ama  Ama  Sola  Sola  Ama  Sola  Ama  Sola  Sola  Sola  Ama  Sola  Sola  Sola  Ama  Sola	lanum sarrachoides laspi arvense laranthus blitoides laranthus retroflexus laranthus hybridus laranthus spinosus laranthus albus	
Pennycress Pigweed, prostrate Ama Pigweed, redroot Pigweed, smooth Ama Pigweed, spiny Ama Pigweed, tumble Puncturevine Purslane, common Ragweed, common Ragweed, giant Senna, coffee Sesbania, hemp Triba	aspi arvense paranthus blitoides paranthus retroflexus paranthus hybridus paranthus spinosus paranthus albus	
Pigweed, prostrate Pigweed, redroot Ame Pigweed, smooth Pigweed, spiny Ame Pigweed, tumble Puncturevine Purslane, common Ragweed, common Ragweed, giant Senna, coffee Sesbania, hemp Ame Ame Sess	naranthus blitoides naranthus retroflexus naranthus hybridus naranthus spinosus naranthus albus	
Pigweed, redroot  Pigweed, smooth  Pigweed, spiny  Ama  Pigweed, tumble  Puncturevine  Purslane, common  Ragweed, common  Ragweed, giant  Senna, coffee  Sesbania, hemp  Ama  Ama  Ama  Sess	naranthus retroflexus naranthus hybridus naranthus spinosus naranthus albus	
Pigweed, smooth Pigweed, spiny Ame Pigweed, tumble Puncturevine Purslane, common Ragweed, common Ragweed, giant Senna, coffee Sesbania, hemp Ame Sess	naranthus hybridus naranthus spinosus naranthus albus	
Pigweed, spiny  Pigweed, tumble  Puncturevine  Purslane, common  Ragweed, common  Ragweed, giant  Senna, coffee  Sesbania, hemp  Ama	naranthus spinosus naranthus albus	
Pigweed, tumble  Puncturevine  Purslane, common  Ragweed, common  Ragweed, giant  Senna, coffee  Sesbania, hemp  Ama	naranthus albus	
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Purslane, common Por Ragweed, common Ami Ragweed, giant Ami Senna, coffee Cas Sesbania, hemp Ses	oulus terrestris	
Ragweed, common  Ragweed, giant  Senna, coffee  Sesbania, hemp  Ami  Ses		
Ragweed, giant Senna, coffee Cas Sesbania, hemp Ses	rtulaca oleracea	
Senna, coffee Cas Sesbania, hemp Ses	brosia artemisiifolia	
Sesbania, hemp Ses	brosia trifida	
	ssia occidentalis	
Chaphard's pures	sbania herbacea	
Shepherd's purse Cap	osella bursa-pastoris	
Sicklepod (java bean) Sen	nna obtusifolia	
Sida, prickly Sida	la spinosa L.	
Smartweed, Pennsylvania Poly	lygonum pensylvanicum	
Smell melon Cuc	cumis melo L. var. dudaim	
Sowthistle, annual Sor	nchus oleraceus L.	
Soybeans, volunteer <sup>1</sup> Glyc	rcine max	
Spurge, prostrate Eup	ohorbia humifusa	
Spurge, spotted Eup	ohorbia maculata L.	
Starbur, bristly Aca	anthospermum hispidum	
Sunflower, common Heli	lianthus annuus	
Sunflower, prairie Cor	rythucha pura	
Sunflower, volunteer Heli	lianthus annuus	
Velvetleaf Abu	utilon theophrasti	
Grass Weeds		
Barley, volunteer <sup>2</sup> Hor	rdeum vulgare	
Barnyardgrass Ech	ninochloa spp.	
Bluegrass, annual Poa	a annua L.	
Corn, volunteer <sup>1</sup> Zea	a mays L.	
Crabgrass, large <sup>3</sup> Digital Di	itaria sanguinalis	
Crabgrass, smooth <sup>3</sup> Digital D	itaria ischaemum	
Cupgrass, woolly Erio	ochloa villosa	
Foxtail, bristly Seta	taria verticillata	
Foxtail, giant Seta		
Foxtail, green Seta	taria faberi	
Foxtail, robust purple Seta		
Foxtail, yellow <sup>3</sup> Seta	taria faberi	

(continued)

Weeds Controlled at 14.7 to 21 fl ozs/A (0.20 to 0.29 lb ai/A) (continued)			
Grass Wee	Grass Weeds (continued)		
Common Name	Scientific Name		
Goosegrass <sup>2</sup>	Eleusine indica		
Johnsongrass, seedling	Sorghum halepense		
Junglerice	Echinochloa colonum		
Millet, proso volunteer	Milium vernale		
Millet, wild proso	Panicum miliaceum L.		
Oat, wild <sup>3</sup>	Avena fatua		
Panicum, fall	Panicum dichotomiflorum		
Panicum, Texas	Panicum texanum		
Rice, red	Oryza sativa L.		
Rice, volunteer <sup>1</sup>	Oryza sativa		
Shattercane	Sorghum vulgare Pers.		
Signalgrass, broadleaf	Brachiaria platyphylla		
Sorghum, volunteer	Sorghum spp.		
Sprangletop	Leptochloa spp.		
Stinkgrass	Eragrostis cilianensis		
Wheat, volunteer <sup>3</sup>	Triticum spp.		
Witchgrass	Panicum virgatum L.		
Additional Weeds Controlled at 19	to 29 fl ozs/A (0.26 to 0.40 lb ai/A)		
	af Weeds		
Common Name	Scientific Name		
Amaranth, Palmer	Amaranthus palmeri		
Kochia	Kochia scoparia		
Waterhemp, common	Amaranthus rudis		
Waterhemp, tall	Amaranthus tuberculatus		
Marestail <sup>3</sup>	Conyza canadensis		
Pusley, Florida			
	Richardia scabra		
Thistle, Russian <sup>2</sup>	Richardia scabra Salsola kali		
	Salsola kali		
Grass	Salsola kali Weeds		
Grass Common Name Sandbur, field <sup>3</sup>	Salsola kali Weeds Scientific Name		
Grass Common Name Sandbur, field <sup>3</sup>	Salsola kali Weeds Scientific Name Cenchrus pauciflorus		
Grass Common Name Sandbur, field³ Biennial and P	Salsola kali  Weeds  Scientific Name  Cenchrus pauciflorus erennial Weeds		
Grass Common Name Sandbur, field³ Biennial and P Common Name	Salsola kali  Weeds  Scientific Name  Cenchrus pauciflorus  erennial Weeds  Scientific Name		
Grass Common Name Sandbur, field³ Biennial and P Common Name Alfalfa	Salsola kali  Weeds  Scientific Name  Cenchrus pauciflorus  erennial Weeds  Scientific Name  Medicago sativa L.		
Grass Common Name Sandbur, field³ Biennial and P Common Name Alfalfa Bermudagrass	Salsola kali  Weeds  Scientific Name  Cenchrus pauciflorus  erennial Weeds  Scientific Name  Medicago sativa L.  Cynodon dactylon		
Grass Common Name Sandbur, field³ Biennial and P Common Name Alfalfa Bermudagrass Bindweed, field	Salsola kali  Weeds  Scientific Name  Cenchrus pauciflorus  erennial Weeds  Scientific Name  Medicago sativa L.  Cynodon dactylon  Convolvulus arvensis L.		
Grass Common Name Sandbur, field³ Biennial and P Common Name Alfalfa Bermudagrass Bindweed, field Bindweed, hedge	Salsola kali  Weeds  Scientific Name  Cenchrus pauciflorus  erennial Weeds  Scientific Name  Medicago sativa L.  Cynodon dactylon  Convolvulus arvensis L.  Calystegia sepium		
Grass Common Name Sandbur, field³ Biennial and P Common Name Alfalfa Bermudagrass Bindweed, field Bindweed, hedge Bluegrass, Kentucky	Salsola kali  Weeds  Scientific Name  Cenchrus pauciflorus  erennial Weeds  Scientific Name  Medicago sativa L.  Cynodon dactylon  Convolvulus arvensis L.  Calystegia sepium  Poa pratensis L.		
Grass Common Name Sandbur, field³ Biennial and P Common Name Alfalfa Bermudagrass Bindweed, field Bindweed, hedge Bluegrass, Kentucky Blueweed, Texas	Salsola kali  Weeds  Scientific Name  Cenchrus pauciflorus  erennial Weeds  Scientific Name  Medicago sativa L.  Cynodon dactylon  Convolvulus arvensis L.  Calystegia sepium  Poa pratensis L.  Helianthus ciliaris DC.		
Grass Common Name Sandbur, field³ Biennial and P Common Name Alfalfa Bermudagrass Bindweed, field Bindweed, hedge Bluegrass, Kentucky Blueweed, Texas Bromegrass, smooth	Salsola kali  Weeds  Scientific Name  Cenchrus pauciflorus  erennial Weeds  Scientific Name  Medicago sativa L.  Cynodon dactylon  Convolvulus arvensis L.  Calystegia sepium  Poa pratensis L.  Helianthus ciliaris DC.  Bromus inermis		
Grass Common Name Sandbur, field³  Biennial and P Common Name Alfalfa Bermudagrass Bindweed, field Bindweed, hedge Bluegrass, Kentucky Blueweed, Texas Bromegrass, smooth Burdock	Salsola kali  Weeds  Scientific Name  Cenchrus pauciflorus  erennial Weeds  Scientific Name  Medicago sativa L.  Cynodon dactylon  Convolvulus arvensis L.  Calystegia sepium  Poa pratensis L.  Helianthus ciliaris DC.  Bromus inermis  Arctium spp.		

(continued)

Additional Weeds Controlled at 19 to 29 fl ozs/A (0.26 to 0.40 lb ai/A) (continued)		
Biennial and Perennial Weeds (continued)		
Common Name	Scientific Name	
Dandelion	Taraxacum officinale	
Dock, smooth*	Rumex spp.	
Dogbane, hemp*	Apocynum cannabinum	
Goldenrod, gray	Solidago nemoralis	
Johnsongrass, rhizome	Sorghum halepense	
Milkweed, common*	Asclepias syriaca	
Milkweed, honeyvine*	Ampelamus albidus	
Muhly, wirestem*	Muhlenbergia frondosa	
Nightshade, silverleaf	Solanum elaeagnifolium	
Nutsedge, purple*	Cyperus rotundus	
Nutsedge, yellow*	Cyperus ferax	
Orchardgrass	Dactylis glomerata L.	
Poinsettia, wild*	Euphorbia heterophylla L.	
Pokeweed	Phytolacca L.	
Quackgrass	Agropyron repens	
Sowthistle, perennial	Sonchus arvensis L.	
Thistle, bull*	Cirsium vulgare	
Thistle, Canada	Cirsium arvense	
Timothy*	Phleum pratense L.	
Wormwood, biennial	Artemisia biennis	

<sup>\*</sup> Suppression only.

#### 15.0 CROP SPECIFIC DIRECTIONS FOR USE

To determine the combined annual total amount of equivalent glufosinate-ammonium from all glufosinate-containing products (L-glufosinate-ammonium and glufosinate-ammonium) refer to **Section 14.1 Use Rate Equivalency Table** to determine the equivalent amount of glufosinate-ammonium (lb ai/A) being applied with the use of **Liberty® ULTRA herbicide** — **Powered by Glu-L<sup>TM</sup> Technology** and add that to the glufosinate-ammonium (lb ai/A) being applied from the use of another glufosinate-containing product. **DO NOT** exceed the equivalent of 1.59 lbs glufosinate-ammonium per acre per year from all glufosinate-containing products.

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

**DO NOT** use this product until you have read the entire label. **DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

In the State of Hawaii and territory of Puerto Rico, use only allowed for corn, cotton, and soybean seed production/propagation (**LibertyLink** or glufosinate-resistant and conventional), including seed increase.

In the State of **New York** Only: Not For Use In Nassau and Suffolk Counties.

<sup>&</sup>lt;sup>1</sup> Volunteer **LibertyLink**® crops from the previous season will not be controlled. A timely cultivation 7 to 10 days after an application may be needed.

<sup>&</sup>lt;sup>2</sup> May require sequential applications for control.

<sup>&</sup>lt;sup>3</sup> For best control of yellow foxtail, field sandbur, crabgrass, wild oats, and volunteer wheat, treat prior to tiller initiation.

#### 15.1 Canola Not registered for use by California

# 15.1.1 LibertyLink® or Glufosinate-resistant Canola In-crop Applications

Apply **Liberty® ULTRA herbicide** — **Powered by Glu-L<sup>TM</sup> Technology** only to canola labeled as **LibertyLink** or glufosinate-resistant. Uniform, thorough spray coverage is necessary to achieve optimum weed control.

Application	Cotyledon up to early bolt stage of <b>LibertyLink</b> or glufosinate-resistant canola.
Timing	• Slight discoloration of the canola may be visible after application. This effect is temporary and will not influence crop growth, maturity, or yield.
Application	<ul> <li>Apply 15 to 19 fl ozs/A depending on weed species, size and density per the Weeds Controlled section.</li> </ul>
Use Rate	<ul> <li>Up to 2 applications in crop may be applied with a minimum of 7 days between applications.</li> </ul>
Maximum	• Up to 39 fl ozs/A may be used per year if no burndown application was used.
per Year	• If a burndown application was used the maximum per year is 58 fl ozs/A.

# 15.1.2 LibertyLink® or Glufosinate-resistant Canola for Seed Propagation

**Liberty ULTRA** may be used in canola seed propagation as a foliar spray to selectively eliminate canola plants that do not carry a gene that imparts resistance to glufosinate-ammonium and as such, can be applied to remove susceptible segregates during canola seed propagation. Breeding material not possessing the glufosinate-ammonium resistance gene will be severely injured or killed if treated with this herbicide.

Application	Cotyledon up to early bolt stage of <b>LibertyLink</b> or glufosinate-resistant canola.
Timing	Slight discoloration of the canola may be visible after application. This effect is temporary and will not influence crop growth, maturity, or yield.
Application	Apply 15 to 19 fl ozs/A.
Application Use Rate	Up to 3 applications in crop may be applied with a minimum of 7 days between applications.
Maximum per Year	Maximum per year is 58 fl ozs/A.

# 15.1.3 Burndown Use Prior to Planting or Prior to Emergence of LibertyLink® or Glufosinate-resistant Canola

**Liberty ULTRA** may be applied as a burndown treatment prior to planting or prior to emergence of **LibertyLink** or glufosinate-resistant canola. Use of **Liberty ULTRA** for burn-down use prior to planting **LibertyLink** or glufosinate-resistant crops will limit the amount of **Liberty ULTRA** that may be used in-crop. Refer to the maximum amount per year for the total amount of **Liberty ULTRA** that may be used.

Application Timing	Prior to planting, prior to emergence of crop or postharvest burndown.
Application Use Rate	Apply 19 to 29 fl ozs/A depending on weed species and intention of post application use. Please see the following application charts.

# 15.1.4 Crop Specific Restrictions

- **DO NOT** use on **LibertyLink®** or glufosinate-resistant canola in the states of Alabama, Delaware, Georgia, Kentucky, Maryland, New Jersey, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.
- **DO NOT** use in Hawaii and Puerto Rico except for use on **LibertyLink** or glufosinate-resistant canola for seed propagation.
- DO NOT apply Liberty® ULTRA herbicide Powered by Glu-L™ Technology within 65 days of harvesting LibertyLink or glufosinate-resistant canola.
- **DO NOT** graze the treated crop or cut for hay.
- **DO NOT** apply **Liberty ULTRA** if canola shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply more than 19 fl ozs/A (0.26 lb ai/A) in a single application for in crop use.
- **DO NOT** apply more than 2 applications in-crop per year.
- DO NOT apply more than 29 fl ozs/A (0.40 lb ai/A) in a single application for burndown use.
- **DO NOT** apply more than 3 applications including burndown per year.
- **DO NOT** allow a retreatment interval of less than 7 days.
- **DO NOT** apply **more** than three applications of **Liberty ULTRA** to **LibertyLink** or glufosinate-resistant canola for seed propagation.
- If applying to canola for seed propagation, DO NOT use treated canola seed for food, feed or oil purposes.
- **DO NOT** apply **more** than 29 fl ozs/A (0.40 lb ai/A) in a single application for burndown in **LibertyLink** or glufosinate-resistant canola.
- **DO NOT** make more than 1 application per year for burndown use for **LibertyLink** or glufosinate-resistant canola.
- **DO NOT** apply more than 58 fl ozs/A (0.80 lb ai/A) per year for **LibertyLink** or glufosinate-resistant canola.
- These crop specific restrictions are in addition to the **Section 13.0 General Use Restrictions (All Crops)**.

### 15.2 Field Corn and Silage Corn Not registered for use by California

# 15.2.1 LibertyLink® or Glufosinate-resistant Field Corn and LibertyLink® or Glufosinate-resistant Silage Corn In-crop Applications

Apply **Liberty ULTRA** only to corn labeled as **LibertyLink** or glufosinate-resistant. Uniform, thorough spray coverage is necessary to achieve consistent weed control. Applications of **Liberty ULTRA** on **LibertyLink** or glufosinate-resistant corn may be made with drop nozzles from emergence until **LibertyLink** or glufosinate-resistant corn is 36 inches tall. Avoid spraying into the whorl or leaf axils of the corn stalks. Uniform, thorough spray coverage of weeds is necessary to achieve consistent weed control.

Application Timing	Emergence through V6 stage of growth.
Application	<ul> <li>Apply 19 to 29 fl ozs/A depending on weed species, size and density per the Weeds Controlled section.</li> </ul>
Use Rate	Up to 3 applications may be applied with a minimum of 7 days between applications up to a maximum of 58 fl ozs/A per year.
Maximum per Year	• 58 fl ozs/A

# 15.2.2 LibertyLink® or Glufosinate-resistant Field Corn for Seed Propagation

**Liberty® ULTRA herbicide** — **Powered by Glu-L™ Technology** may be used in field corn seed propagation as a foliar spray to selectively eliminate corn plants that do not carry a gene that imparts resistance to glufosinate-ammonium and as such, can be applied to remove susceptible segregates during corn seed propagation. Breeding material not possessing the glufosinate-ammonium resistance gene will be severely injured or killed if treated with this herbicide.

Application Timing  • Emergence through V6 stage of growth or 24 inches tall.		
Application	• Apply 15 fl ozs/A.	
Application Use Rate	Up to 2 applications may be applied with a minimum of 10 days between applications up to a maximum of 30 fl ozs/A per year.	
Maximum per Year	• 30 fl ozs/A	

# 15.2.3 Burndown Use Prior to Planting or Prior to Emergence of LibertyLink® or Glufosinate-resistant Field Corn

**Liberty ULTRA** may be applied as a burndown treatment prior to planting or prior to emergence of **LibertyLink** or glufosinate-resistant Field corn. Use of **Liberty ULTRA** for burn-down use prior to planting **LibertyLink** or glufosinate-resistant crops will limit the amount of **Liberty ULTRA** that may be used in-crop. Refer to the maximum amount per year for the total amount of **Liberty ULTRA** that may be used.

Application Timing	Prior to planting, prior to emergence of crop.	
Application Use Rate	Apply 19 to 29 fl ozs/A depending on weed species and intention of post application use. Please see the following application charts.	

# Table 15.2.3. Use Rates for Burndown Applications for LibertyLink or Glufosinate-resistant Field Corn

Burndown (fl ozs/A)	Additional In-crop Applications if a Burndown Application Made	Maximum Per Year (fl ozs/A)
19 to 29	Up to 2 applications at 19 to 29 fl ozs/A	58

#### 15.2.4 Crop Specific Restrictions

- **DO NOT** apply **Liberty ULTRA** within 60 days of harvesting corn forage and within 70 days of harvesting corn grain and corn fodder.
- **DO NOT** apply more than 58 fl ozs/A (0.80 lb ai/A) of **Liberty ULTRA** on **LibertyLink** or glufosinate-resistant field corn per year.
- **DO NOT** use nitrogen solutions as spray carriers.
- **DO NOT** apply **Liberty ULTRA** if corn shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply more than 29 fl ozs/A (0.40 lb ai/A) in a single application except for corn grown for seed propagation.
- **DO NOT** apply more than 15 fl ozs/A (0.21 lb ai/A) in a single application for corn grown for seed propagation.
- **DO NOT** apply more than 2 applications in-crop per year.
- DO NOT apply more than 3 applications when using reduced rates including burndown use per year.
- DO NOT allow a retreatment interval of less than 7 days for in-crop use.
- **DO NOT** allow a retreatment interval of less than 10 days for corn seed propagation use.
- DO NOT use on LibertyLink or glufosinate-resistant field corn/silage corn grown in California.
- **DO NOT** apply more than 2 applications for corn seed propagation per year.

- **DO NOT** apply more than 29 fl ozs/A (0.40 lb ai/A) in a single application for burndown in **LibertyLink**® or glufosinate-resistant Field corn.
- DO NOT make more than 1 application per year for burndown use for LibertyLink or glufosinateresistant Field corn.
- **DO NOT** use in Hawaii and Puerto Rico except for use on **LibertyLink** or Glufosinate-resistant Field Corn (field and silage) for Seed Propagation.
- These crop specific restrictions are in addition to the **Section 13.0 General Use Restrictions (All Crops)**.

### 15.3 Sweet Corn Not registered for use by California

# 15.3.1 LibertyLink® or Glufosinate-resistant Sweet Corn In-crop Applications

Apply **Liberty® ULTRA herbicide** — **Powered by Glu-L™ Technology** only to sweet corn labeled as **LibertyLink** or glufosinate-resistant. Uniform, thorough spray coverage is necessary to achieve consistent weed control.

Application Timing	Emergence through V6 stage of growth.
Application	Apply 14.7 fl ozs/A.
Application Use Rate	Up to 2 applications may be applied with a minimum of 7 days between applications.
Maximum per Year  • 30 fl ozs/A	

# 15.3.2 Burndown Use Prior to Planting or Prior to Emergence of LibertyLink® or Glufosinate-resistant Sweet Corn

**Liberty ULTRA** may also be applied as a burndown treatment prior to planting or prior to emergence of **LibertyLink** or glufosinate-resistant Sweet corn. **Liberty ULTRA** may also be used as a substitute for tillage in fallow fields to control or suppress weeds. Use of **Liberty ULTRA** for burn-down use prior to planting **LibertyLink** or glufosinate-resistant crops will limit the amount of **Liberty ULTRA** that may be used in-crop. Refer to the maximum amount per year for the total amount of **Liberty ULTRA** that may be used.

Application Timing  • Prior to planting, prior to emergence of crop.	
Application Use Rate	Apply 19 to 29 fl ozs/A depending on weed species and intention of post application use. Please see the following application charts.

# **15.3.3 Crop Specific Restrictions**

- **DO NOT** apply **Liberty ULTRA** within 50 days of harvesting sweet corn ears and within 55 days of harvesting stover.
- If Liberty ULTRA was used in a burndown application, DO NOT make postemergence applications to the crop.
- **DO NOT** apply **Liberty ULTRA** if corn shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- DO NOT apply more than two applications of Liberty ULTRA to sweet corn per year.
- **DO NOT** allow a retreatment interval of less than 7 days.
- **DO NOT** apply more than 14.7 fl ozs/A (0.20 lb ai/A) in a single application for in-crop applications.
- DO NOT apply more than 29 fl ozs/A (0.40 lb ai/A) of Liberty ULTRA on sweet corn per year.
- DO NOT use on LibertyLink or glufosinate-resistant sweet corn grown in California.
- **DO NOT** apply more than 29 fl ozs/A (0.40 lb ai/A) in a single application for burndown in **LibertyLink®** or glufosinate-resistant Sweet corn.

- **DO NOT** make more than 1 application per year for burndown use for **LibertyLink** or glufosinate-resistant sweet corn.
- These crop specific restrictions are in addition to the **Section 13.0 General Use Restrictions (All Crops)**.

#### **15.4 Cotton** Not registered for use by California

# 15.4.1 LibertyLink® or Glufosinate-resistant Cotton In-crop Applications

Apply **Liberty® ULTRA herbicide** — **Powered by Glu-L<sup>TM</sup> Technology** only to cotton labeled as **LibertyLink** or glufosinate-resistant. Uniform, thorough spray coverage is necessary to achieve consistent weed control. Tank mixes with emulsifiable concentrate (EC) formulations may result in temporary crop injury. These tank mixes are not advised when cotton plants are exhibiting slow growth or vigor.

Application Timing  • Emergence up to early bloom.	
Application	<ul> <li>Apply 19 to 29 fl ozs/A depending on weed species, size, and density per the Weeds Controlled section.</li> </ul>
Use Rate	<ul> <li>Up to 3 applications may be applied with a minimum of 10 days between applications up to a maximum of 58 fl ozs/A per year.</li> </ul>
Maximum per Year  • 58 fl ozs/A	

# 15.4.2 LibertyLink® or Glufosinate-resistant Cotton for Seed Propagation

**Liberty ULTRA** may be used in cotton seed propagation as a foliar spray to selectively eliminate cotton plants that do not carry a gene that imparts resistance to glufosinate-ammonium and as such, can be applied to remove susceptible segregates during cotton seed propagation. Breeding material not possessing the glufosinate-ammonium resistance gene will be severely injured or killed if treated with this herbicide.

Application Timing	Emergence up to early bloom.
Application	Apply 19 to 29 fl ozs/A.
Use Rate	Up to 3 applications may be applied with a minimum of 10 days between applications up to a maximum of 58 fl ozs/A per year.
Maximum per Year • 58 fl ozs/A	

# 15.4.3 Burndown Use Prior to Planting or Prior to Emergence of LibertyLink® or Glufosinate-resistant Cotton

**Liberty ULTRA** may also be applied as a burndown treatment prior to planting or prior to emergence of **LibertyLink** or glufosinate-resistant Cotton. **Liberty ULTRA** may also be used as a substitute for tillage in fallow fields to control or suppress weeds. Use of **Liberty ULTRA** for burn-down use prior to planting **LibertyLink** or glufosinate-resistant crops will limit the amount of **Liberty ULTRA** that may be used in-crop. Refer to the maximum amount per year for the total amount of **Liberty ULTRA** that may be used.

Burndown	Additional In-crop Applications if a	Maximum Per Year
(fl ozs/A)	Burndown Application Made	(fl ozs/A)
22 to 29	Up to 1 application at 22 to 29 fl ozs/A	

# 15.4.4 Non-glufosinate-resistant Cotton In-crop Applications (Directed Application with Hooded Sprayer)

Application of **Liberty® ULTRA herbicide** — **Powered by Glu-L<sup>TM</sup> Technology** to cotton varieties **not labeled as LibertyLink®** or glufosinate-resistant requires the use of hooded spray equipment designed to minimize exposure of the spray to the cotton stand. Uniform, thorough spray coverage is necessary to achieve consistent weed control. Tank mixes with emulsifiable concentrate (EC) formulations may result in temporary crop injury. These tank mixes are not advised when cotton plants are exhibiting slow growth or vigor.

Application Timing	Emergence up to early bloom.
Application	<ul> <li>Apply 19 to 29 fl ozs/A per application depending on weed species, size and density per the Weeds Controlled section.</li> </ul>
Use Rate	Up to 3 applications may be applied with a minimum of 10 days between applications up to a maximum of 58 fl ozs/A per year.
Maximum per Year  • 58 fl ozs/A	

#### **Application Methods to Non-glufosinate-resistant Cotton**

Application of **Liberty ULTRA** to non glufosinate-resistant cotton varieties requires the use of hooded spray equipment designed to minimize exposure of the spray to the cotton stand. A hooded sprayer directs the spray onto weeds, while shielding the cotton stand from contact. Use nozzles that provide uniform coverage within the treated area. Keep hoods on these sprayers adjusted to protect desirable vegetation. Extreme care must be exercised to avoid exposure of the desirable vegetation to the spray.

With a hooded sprayer, the spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution. This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. The spray hoods must be operated on the ground or skimming across the ground. Tractor speed must be adjusted to avoid bouncing of the spray hoods. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground. If the hoods are raised, spray particles may escape and come into contact with the cotton, causing damage or destruction of the crop.

Herbicide rates and spray volume instructions are presented as broadcast equivalents and must be reduced in proportion to the area actually treated. Use the following formulas to calculate the correct rate and volume per planted (field) acre:

Band width in inches	X	Broadcast RATE per acre	=	Amount of banded product needed per acre
Row width in inches				
Band width in inches Row width in inches	Х	Broadcast spray VOLUME per acre	=	Banded spray volume needed per acre

#### 15.4.5 Crop Specific Restrictions

- **DO NOT** apply **Liberty ULTRA** to cotton in Florida, south of Tampa (Florida Route 60), or in Hawaii or Puerto Rico, except for test plots, breeding nurseries or seed propagation.
- DO NOT apply Liberty ULTRA within 70 days prior to cotton harvest.
- DO NOT apply more than 29 fl ozs/A (0.40 lb ai/A) per application for burndown use.
- **DO NOT** make more than 1 burndown application per year for **LibertyLink** or glufosinate-resistant cotton.
- DO NOT apply more than 29 fl ozs/A (0.40 lb ai/A) per application for in-crop use including seed propagation.
- DO NOT apply more than 58 (0.80 lb ai/A) fl ozs per year.
- **DO NOT** apply more than 3 applications per year when using reduced rates.
- If a burndown application is made, **DO NOT** apply more than 2 in-crop applications per year.
- **DO NOT** allow a retreatment interval of less than 10 days.

- Refer to **Rotational Crop Restrictions** under the **Product Information** section of this label for the appropriate rotational crop plant-back intervals.
- **DO NOT** apply more than 29 fl ozs/A (0.40 lb ai/A) per application.
- DO NOT apply in crop to non-glufosinate-resistant cotton except with a hooded sprayer.
- DO NOT tank mix Liberty® ULTRA herbicide Powered by Glu-L™ Technology with both an EC formulation herbicide and acephate insecticide.
- These crop specific restrictions are in addition to the **Section 13.0 General Use Restrictions (All Crops)**.

### 15.5 Soybean Not registered for use by California

# 15.5.1 LibertyLink® or Glufosinate-resistant Soybean In-crop Applications

Apply **Liberty ULTRA** only to soybean designated as **LibertyLink** or glufosinate-resistant. Uniform, thorough spray coverage is necessary to achieve optimum weed control.

• Emergence up to but not including bloom or R1 growth stage.	
Application	<ul> <li>Apply 19 to 29 fl ozs/A depending on weed species, size and density per the Weeds Controlled section.</li> </ul>
Use Rate	Up to 2 in-crop applications may be applied with a minimum of 5 days between applications up to a maximum of 58 fl ozs/A per year.
Maximum per Year	• 58 fl ozs/A

# 15.5.2 LibertyLink® or Glufosinate-resistant Soybean for Seed Propagation

**Liberty ULTRA** may be used in soybean seed propagation as a foliar spray to selectively eliminate cotton plants that do not carry a gene that imparts resistance to glufosinate-ammonium and as such, can be applied to remove susceptible segregates during cotton seed propagation. Breeding material not possessing the glufosinate-ammonium resistance gene will be severely injured or killed if treated with this herbicide.

Application Timing	Emergence up to but not including bloom or R1 growth stage.	
Application	Apply 19 to 29 fl ozs/A depending on size and density.	
Application Use Rate	Up to 2 in-crop applications may be applied with a minimum of 5 days between applications up to a maximum of 58 fl ozs/A per year.	
Maximum per Year	• 58 fl ozs/A	

# 15.5.3 Burndown Use Prior to Planting or Prior to Emergence of LibertyLink® or Glufosinate-resistant Soybean

**Liberty ULTRA** may also be applied as a burndown treatment prior to planting or prior to emergence of **LibertyLink** or glufosinate-resistant Soybean. **Liberty ULTRA** may also be used as a substitute for tillage in fallow fields to control or suppress weeds. Use of **Liberty ULTRA** for burn-down use prior to planting **LibertyLink** or glufosinate-resistant crops will limit the amount of **Liberty ULTRA** that may be used in-crop. Refer to the maximum amount per year for the total amount of **Liberty ULTRA** that may be used.

Burndown	Additional In-crop Applications if a	Maximum Per Year
(fl ozs/A)	Burndown Application Made	(fl ozs/A)
19 to 29	Up to 2 applications at 19 to 29 fl ozs/A	58

# 15.5.4 Crop Specific Restrictions

- DO NOT apply Liberty® ULTRA herbicide Powered by Glu-L™ Technology within 70 days of harvesting LibertyLink® or Glufosinate-resistant soybean resistant soybean seed.
- **DO NOT** apply more than 58 fl ozs/A (0.80 lb ai/A) of **Liberty ULTRA** on **LibertyLink** or glufosinate-resistant soybeans per year.
- **DO NOT** apply more than 29 fl ozs/A (0.40 lb ai/A) in a single application.
- **DO NOT** make more than 2 in-crop applications per acre per year.
- **DO NOT** apply more than 3 applications per year when using reduced rates.
- **DO NOT** graze the treated crop or cut for hay.
- **DO NOT** apply **Liberty ULTRA** if soybeans show injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** allow a retreatment interval of less than 5 days.
- **DO NOT** make more than 1 application per year for burndown use for **LibertyLink** or glufosinate-resistant soybean.
- **DO NOT** use in Hawaii and Puerto Rico except for use on **LibertyLink** or Glufosinate-resistant soybean for seed propagation.
- These crop specific restrictions are in addition to the **Section 13.0 General Use Restrictions (All Crops)**.

# 15.6 Burndown Use Prior to Planting or Prior to Emergence of Non-glufosinate resistant crops (Canola, Field, Corn, Sweet Corn, Cotton, Soybean)

Not registered for use by California

**Liberty ULTRA** may be applied as a burndown treatment prior to planting or prior to emergence of non-glufosinate-resistant canola, field corn, sweet corn, cotton or soybean. Refer to the maximum amount per year for the total amount of **Liberty ULTRA** that may be used.

Crop	Burndown (fl ozs/A)	Additional In-crop Applications if a Burndown Application Made	Maximum Per Year (fl ozs/A)
Non-glufosinate-resistant Canola, Field corn, Sweet Corn, or Soybean	19 to 29	None	29
Non-glufosinate-resistant Cotton	19 to 29	1 application at 21 to 29 fl oz/A	58

# Restrictions to the Directions for Burndown Use in/on Non-glufosinate-resistant Canola, Field Corn, Sweet Corn, Cotton, or Soybean

- **DO NOT** apply more than 29 fl ozs/A (0.40 lb ai/A) in a single application for burndown in non-glufosinate-resistant canola, non-glufosinate-resistant field corn, non-glufosinate-resistant sweet corn, non-glufosinate-resistant cotton, or non-glufosinate-resistant soybean.
- **DO NOT** make more than 1 application per year for burndown use for non-glufosinate-resistant canola, non-glufosinate-resistant field corn, non-glufosinate-resistant sweet corn, non-glufosinate-resistant cotton, or non-glufosinate-resistant soybean.
- **DO NOT** apply more than 29 fl ozs/A (0.40 lb ai/A) per year for non-glufosinate-resistant canola, non-glufosinate-resistant field corn, non-glufosinate-resistant sweet corn, or non-glufosinate-resistant soybean.
- **DO NOT** make any in-crop applications for non-glufosinate-resistant canola, non-glufosinate-resistant field corn, non-glufosinate-resistant sweet corn, or non-glufosinate-resistant soybean.
- DO NOT apply more than 58 fl ozs/A (0.80 lb ai/A) per year for non-glufosinate-resistant cotton.
- **DO NOT** apply in crop to non-glufosinate-resistant cotton except with a hooded sprayer. See applications directions for cotton for more information.
- These crop specific restrictions are in addition to the **Section 13.0 General Use Restrictions (All Crops)**.

# 15.7 Fallow Fields and Postharvest Uses Associated with Canola, Field Corn, Sweet Corn, Cotton and Soybean Production Not registered for use by California

**Liberty® ULTRA herbicide** — **Powered by Glu-L<sup>TM</sup> Technology** may be used for the control of listed weeds on fields following canola, corn, sweet corn, cotton and soybean harvest and for the control of listed weeds on fallow fields prior to planting canola, field corn, sweet corn, cotton and soybean.

#### Restrictions to the Directions for Use in Fallow Fields and Postharvest

- **DO NOT** apply more than 29 fl ozs/A (0.40 lb ai/A) in a single application to fallow fields or postharvest in a single application per year.
- DO NOT make more than 1 application in fallow fields or postharvest per year.
- If Liberty ULTRA is applied according to labeled crop use on the same acre, DO NOT exceed the
   Maximum annual use Rate (as stated in Section 13.0 General Use Restrictions) from sequential applications of Liberty ULTRA when applied to fallow fields or postharvest.
- These crop specific restrictions are in addition to the Section 13.0 General Use Restrictions (All Crops).

#### 16.0 ROTATIONAL CROP RESTRICTIONS

Rotational crop planting intervals following application of **Liberty ULTRA** are listed below. Failure to comply with these restrictions may result in illegal residues in rotated crops.

Rotational Crop	Plant-back Interval (minimum rotational crop planting interval from last application)	
Canola, Corn, Sweet Corn, Cotton, Soybean	May be planted at any time	
Cover Crops*	7 days	
Brassica Leafy Vegetables, Leafy Vegetables, Root and Tuber Vegetables, and Small Grains (barley, buckwheat, oats, rye, teosinte, triticale, and wheat)	70 days	
Other Crops	180 days	

<sup>\*</sup> Planting of cover crops for conservation purposes may be planted in fields previously treated with **Liberty ULTRA** as long as these cover crops are not grazed by livestock nor harvested for food. For best results, **DO NOT** plant cover crops less than 7 days after an application of **Liberty ULTRA** nor before 1/2 inch of rainfall or irrigation has occurred. Planting sooner than this may result in stand reduction. Planting of crops listed in the **Rotational Crop Restrictions** that follow the listed planting intervals and other restrictions are considered a rotational crop and therefore may be harvested.

#### 17.0 CONDITIONS OF SALE AND LIMITATIONS OF WARRANTY AND LIABILITY

# **Conditions of Sale and Warranty**

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

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BASF Corporation 26 Davis Drive Research Triangle Park, NC 27709

