

# Liberty<sup>®</sup> HERBICIDE

A NON-SELECTIVE HERBICIDE FOR USE ONLY ON CORN, SOYBEANS, AND CANOLA TOLERANT TO THE ACTIVE INGREDIENT IN THIS PRODUCT. BAYER CROPSCIENCE RECOMMENDS USE ONLY ON SEED DESIGNATED AS LIBERTYLINK® OR WARRANTED BY BAYER CROPSCIENCE AS BEING TOLERANT TO LIBERTY® HERBICIDE.

\*\*Equivalent to 1.67 pounds of active ingredient per U.S. gallon.

EPA Reg No. 264-660

EPA Est. No. 264-MI-001 EPA Est. No. 407-IA-2

# KEEP OUT OF REACH OF CHILDREN WARNING - AVISO

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.)

For MEDICAL And TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577

For <u>PRODUCT USE</u> Information Call 1-866-99BAYER (1-866-992-2937)

# **FIRST AID**

If swallowed	Rinse mouth thoroughly with plenty of water.
	Do not induce vomiting.
	Get medical attention immediately.
If in Eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes.
	Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
	Get medical attention if irritation develops or persists.
If on skin or clothing	Take off contaminated clothing.
	Wash skin immediately with plenty of soap and water.
	Get medical attention.
If inhaled	Move person to fresh air.
	Get medical attention if breathing difficulty develops.
	HOT LINE NUMBER
Have the product contain	her or label with you when calling a poison control center or doctor, or when going for treatment. Call 1-800-
334-7577 for emergency	medical treatment information.
	NOTE TO PHYSICIAN
If this product is ingested and sodium sulfate admi	d, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal nistration. Additionally, call 1-800-334-7577 immediately for further information.

# PRECAUTIONARY STATEMENTS

# HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

May be fatal if absorbed through skin. Causes moderate eye irritation. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical resistance category selection chart.

#### Applicators and other handlers must wear:

Coveralls worn over short-sleeved shirt and short pants; chemical-resistant gloves such as barrier laminate, butyl rubber  $\geq$ 14 mils, nitrile rubber  $\geq$ 14 mils, neoprene rubber  $\geq$ 14 mils, polyvinyl chloride (PVC)  $\geq$ 14 mils, or Viton®  $\geq$ 14 mils; chemical resistant footwear plus socks; protective eyewear. Wear a chemical resistant apron when mixing/loading and cleaning equipment.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### Engineering control statement:

When handlers use closed systems or enclosed cabs 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.

# USER SAFETY RECOMMENDATIONS

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing 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.

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present, except as allowed by the Use Directions for rice on this label. Do not apply to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

This pesticide is toxic to vascular plants and should be used strictly in accordance with the drift and run-off 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, such as no till, limited till and contour plowing; these methods also reduce pesticide run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands, etc. or on the downhill side of fields where run-off could occur to minimize water run-off is recommended.

#### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

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 should not exceed 125°F. If storage temperature for bulk Liberty® Herbicide is below 32°F, the material should not be pumped until its temperature exceeds 32°F. Protect against direct sunlight.

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

#### CONTAINER DISPOSAL: [1 and 2½ Gallon Containers Only]

Empty containers should be triple rinsed (or equivalent), then offer for recycling or reconditioning; 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.

[15 Gallons, 60 Gallons, 120 Gallons & Bulk Containers Only]

This is a sealed returnable container to be used only for Liberty® Herbicide. When this container is empty, it must not be opened, cleaned, or discarded. Empty containers must be returned to the original purchase location.

SEED DISPOSAL: To dispose of out-of-date or otherwise unmarketable seed from plants which have been treated with Liberty® Herbicide, broadcast and lightly incorporate seed into field soils using disc or other suitable implement. Any resulting crop may be destroyed by chemical or mechanical means. Alternatively, seed may be destroyed by deep burial, incineration or landfill disposal.

# **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.

#### 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, such as plants, soil, or water, is: coveralls worn over short-sleeved shirt and short pants; chemical-resistant gloves such as barrier laminate, butyl rubber  $\geq$ 14 mils, nitrile rubber  $\geq$ 14 mils, neoprene rubber  $\geq$ 14 mils, polyvinyl chloride (PVC)  $\geq$ 14 mils, or Viton®  $\geq$ 14 mils; chemical resistant footwear plus socks; protective eyewear.

# **GENERAL INFORMATION**

Liberty® Herbicide is a water-soluble herbicide for application as a foliar spray for the control of a broad spectrum of emerged annual and perennial grass and broadleaf weeds in corn, soybeans and canola.

Liberty® Herbicide may also be used during corn, soybean and seed production to remove corn and soybean plants that are not tolerant to glufosinate-ammonium.

# IMPORTANT CROP SAFETY INFORMATION

## READ BEFORE USING THIS PRODUCT

Liberty® Herbicide is for use only on corn, soybeans and canola tolerant to the active ingredient in this product. Bayer CropScience recommends use only on corn, soybeans and canola designated as LibertyLink® or warranted by Bayer CropScience as being tolerant to Liberty® Herbicide.

The basis of selectivity of Liberty® Herbicide in corn, soybeans and canola is the presence of a gene in LibertyLink® or other Bayer CropScience warranted corn, soybeans and canola varieties which results in a plant that is tolerant to the active ingredient of Liberty® Herbicide. Corn, soybeans and canola not containing this gene will not be tolerant to Liberty® Herbicide and severe injury may result.

Use of Liberty® Herbicide on corn, soybeans or canola not designated as LibertyLink® or not warranted by Bayer CropScience may result in severe crop injury and/or yield loss.

Do not allow spray to contact foliage or green tissue of desirable vegetation other than corn, soybeans and canola tolerant to the active ingredient in this product. This product may injure or kill all green vegetation contacted by the spray other than LibertyLink® corn, soybeans and canola or other corn, soybeans and canola varieties warranted by Bayer CropScience.

Bayer CropScience does not warrant the crop safety or weed control of this product if used on corn, soybean or canola varieties other than those designated as LibertyLink® or warranted by Bayer CropScience to safely withstand the application of Liberty® Herbicide.

#### SPRAY DRIFT

SENSITIVE AREAS: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitats for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Do not apply under circumstances where possible drift to unprotected persons or to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption can occur.

#### INFORMATION ON DROPLET SIZE:

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions below).

Uniform, thorough spray coverage is important to achieve consistent weed control. Select nozzles and pressure that deliver MEDIUM spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572. Nozzles that deliver COARSE spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of weeds.

CONTROLLING DROPLET SIZE:

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Type Use a nozzle type that is designed for the intended application.

#### APPLICATION HEIGHT:

For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy.

#### WIND:

Drift potential is lowest between wind speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Wind speed must be measured adjacent to the application site, on the upwind side, immediately prior to application.

#### TEMPERATURE AND HUMIDITY:

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry. Avoid spraying during conditions of low humidity and/or high temperatures.

#### TEMPERATURE INVERSIONS:

Do not make applications into areas of temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source 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.

#### CLEANING INSTRUCTIONS

Before using Liberty® Herbicide, 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 should be thoroughly rinsed using a strong detergent solution.

After using Liberty® Herbicide, triple rinse the spray equipment and clean with a commercial tank cleaner before using for crops not labeled LibertyLink® or warranted by Bayer CropScience. 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.

# APPLICATION DIRECTIONS FOR USE ON CANOLA

To assure the optimum benefit from the use of Liberty® Herbicide, apply when weeds are in an early stage of growth, before they stress the growth of canola. Apply as described in the "Application Methods" section to get maximum weed control.

#### APPLICATION TIMING

Applications of Liberty® Herbicide on canola may be made from the cotyledon stage up to the early bolting stage of the canola. Slight discoloration of the canola may be visible after application. This effect is temporary and will not influence crop growth, maturity or yield. Liberty® Herbicide is a foliar-active material with no soil-residual activity. For best results, apply to emerged, young actively growing weeds. Weeds that emerge after application will not be controlled. Liberty® Herbicide will have an effect on weeds that are larger than the recommended leaf stage, however speed of activity and control may be reduced. 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 drought, cool temperatures or extended periods of cloudiness. Liberty® Herbicide is rainfast 4 hours after application, therefore, rainfall within 4 hours may necessitate retreatment.

#### RESTRICTIONS TO THE DIRECTIONS FOR USE ON CANOLA

- 1. **DO NOT** use on canola in the states of Alabama, Delaware, Georgia, Kentucky, Maryland, New Jersey, North Carolina, South Carolina, Tennessee, Virginia and West Virginia
- 2. **DO NOT** apply more than 68 ounces per acre of Liberty® Herbicide for weed control on the canola crop per growing season.
- 3. **DO NOT** apply Liberty® Herbicide within 65 days of harvesting canola.
- 4. **DO NOT** plant rotation crops in a field treated with Liberty® Herbicide within 120 days after the last application of this product with the exception of wheat, barley, buckwheat, millet, oats, rye, sorghum, and triticale which may be planted 70 days after the last application of this product. Corn, soybeans, canola, and sugar beets, cotton and rice tolerant to the active ingredient in Liberty® Herbicide may be planted at any time.
- 5. **DO NOT** graze the treated crop or cut for hay.

- 6. **DO NOT** add surfactants or crop oils. Anti-foams or drift control agents may be added if needed.
- 7. **DO NOT** apply Liberty® Herbicide if canola shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- 8. DO NOT apply this product through any type of irrigation system.
- 9. DO NOT tank mix Liberty® Herbicide with other pesticides including herbicides unless recommended on this label.

#### SPRAY ADDITIVES

Liberty<sup>®</sup> Herbicide must be applied with ammonium sulfate (AMS). Use only fine feed grade or spray grade AMS at 3 pounds per acre. Antifoams or drift control agents may be added if needed.

#### MIXING INSTRUCTIONS

Liberty® Herbicide must be applied with properly calibrated and clean equipment. Liberty® Herbicide is specially formulated to mix readily in water. Prior to adding Liberty® Herbicide 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*).

Mix Liberty Herbicide with water to make a finished spray solution as follows:

- 1. Fill tank to one-half full with clean water.
- 2. Add the appropriate amount of AMS to the spray tank.
- 3. If tank mixing with a grass herbicide specified on this label, add the correct amount of the grass herbicide.
- 4. Add the correct amount of Liberty® Herbicide.
- 5. Add the remaining amount of water, begin agitation, and spray out immediately.

The addition of an antifoaming agent may reduce foaming, especially when using soft water.

Ensure that all spray system lines including pipes, booms, etc. have the correct concentration of Liberty® Herbicide/water mixture before the application is started. Flush out any remaining air or water from the spray system lines before starting the crop application. Keep bypass line on or near bottom of tank to minimize foaming. Screen size in nozzles or line strainers should be no finer than 50 mesh.

If the tank mix partners recommended on this label are added, maintain good agitation at all times until contents of the tank are spayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

#### APPLICATION METHODS

Do not use flood jet nozzles, controlled droplet application equipment or air-assisted spray equipment. Uniform, thorough spray coverage is important to achieve consistent weed control.

Ground application: Refer to the *Rate Recommendation Tables for Weed Control in Canola* for proper application rates. DO NOT apply when winds are gusty, or when conditions will favor movement of spray particles off the desired spray target. To avoid drift and insure consistent weed control, apply Liberty® Herbicide with the spray boom as low as possible while maintaining a uniform spray pattern. Liberty® Herbicide should be applied broadcast in a minimum of 10 gallons of water per acre using a minimum spray pressure of 40 pounds per square inch and a maximum ground speed of 10 mph. The use of 80 degree or 110 degree flat fan nozzles is highly recommended for optimum spray coverage and canopy penetration. Application of the spray at a 45 degree angle forward will result in better spray coverage. **Under dense weed/crop canopies, a broadcast rate of 15-20 gallons of water per acre should be used so that thorough spray coverage will be obtained.** For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy.

### RATE RECOMMENDATION TABLES FOR WEED CONTROL IN CANOLA

The rate of Liberty® Herbicide in fluid ounces (pints) of formulated product per acre to be used for the control of weeds at selected heights are shown in the following tables. In weed populations with mixed species, select the rate needed for all species present.

# Grass Weeds Controlled with Liberty® Herbicide at 34 fl. oz./A (2.1 pt./A) Plus Ammonium Sulfate

Weed Species	Growth Stage of Weed (Leaves/Max. Height)	Comments	
Barley, volunteer*	1-3 leaves (3")	A second application may be required	
Foxtail, yellow			
Sandbur, field	1-4 leaves (2")	Apply prior to tillering	
Oat, wild		Maximum of 1 tiller; a second application	
Wheat, volunteer	1-4 leaves (4")	may be required	
Corn, volunteer	1-4 leaves (6")		
Barnyardgrass			
Crabgrass, large			
Crabgrass, smooth			
Millet, volunteer proso	1-5 leaves (3")	Maximum of 1 tiller	
Millet, wild proso			
Panicum, fall			
Panicum, Texas			
Foxtail, giant	( ) ( ( ) ( ( ) ( ) ( ) ( ) ( ) ( ) ( )		
Foxtail, green	1-6 leaves (4")	Maximum of 2 tillers	
Cupgrass, woolly	1-8"		

#### \* Suppression only

When used in tank-mix combination with Assure® II Herbicide at 4 to 5 fl. oz. per acre, Select® 2EC Herbicide at 2 to 3 fl. oz. per acre, or Poast® Herbicide at 6 to 8 fl. oz. per acre, Liberty® Herbicide may be applied at 28 fl. oz. per acre plus ammonium sulfate to control grass weed species at the growth stage of weeds indicated in the table above. For improved control of heavy populations or larger than recommended volunteer wheat, volunteer barley, yellow foxtail, and wild oats, Liberty® Herbicide at 34 fl. oz per acre can be tank mixed with Assure® II Herbicide, or Poast® Herbicide.

## Perennial Weeds Controlled with Liberty<sup>®</sup> Herbicide at 34 fl. oz./A (2.1 pt./A) Plus Ammonium Sulfate

Weed Species	Growth Stage of Weed (Leaves/Max. Height)	Comments
Quackgrass	1-4 leaves (4")	
Sowthistle, perennial		Top growth control; a second
Thistle, Canada	1-6 leaves (4 <sup>*</sup> )	

# Broadleaf Weeds Controlled with Liberty<sup>®</sup> Herbicide at 32 fl. oz./A (2 pt./A) Plus Ammonium Sulfate

Weed Species	Growth Stage of Weed (Leaves/Max. Height)	Comments	
Buckwheat, wild	at, wild 1.3 logyog		
Pigweed, redroot	1-3 leaves	Up to 2" in height	
Carpetweed			
Lambsquarter, common		Up to 2" in height	
Marshelder			
Ladysthumb	1.1.1.00000		
Pigweed, smooth	1-4 leaves		
Pigweed, spiny		Up to 3" in height	
Smartweed, Pennsylvania			
Velvetleaf			
Mustard, wild	1-5 leaves	Up to 3" in height	
Buffalobur			
Chickweed, common		Up to 3" in height	
Mallow, Venice			
Nightshade, eastern black	1-6 leaves		
Ragweed, giant			
Shepherd's purse			
Sowthistle, annual			
Cocklebur, common			
Ragweed, common	1-8 leaves	Up to 5" in height	
Sunflower, common			
Kochia	1 0"		
Thistle, Russian	1-2		
Pigweed, prostrate			
Purslane, common	4.0"		
Waterhemp, tall	1-3		
Wormwood, biennial			
Pennycress, field	1-4"		
Dandelion	1-6"	Diameter of rosette	

For optimum canola yield, early weed removal and application prior to canola bolting is important. For optimum control of both early and late germinating grass and broadleaf weed species, Liberty® Herbicide may be applied sequentially at 20 fl. oz./A to 1-3 leaf grass and 1-2" broadleaf weed species followed by a second application of 20 fl. oz./A 7-10 days later.

# APPLICATION DIRECTIONS FOR USE ON FIELD CORN, SILAGE CORN AND SOYBEANS

THOROUGH SPRAY COVERAGE IS VERY IMPORTANT. Visual effects and control from Liberty® Herbicide applications occur within 2 to 4 days after application under good growing conditions. Liberty® Herbicide works best when weeds are actively growing. To maximize weed control, no cultivation should occur in the period from 5 days before an application to 5 days after an application of Liberty® Herbicide.

#### **APPLICATION TIMING**

Liberty® Herbicide is a foliar-active material with little or no soil-residual activity. Best results are obtained when applications are made to actively growing weeds. Weeds that emerge after application will not be controlled. Applications of Liberty® following the use of soil-applied insecticides will not injure corn.

Applications of Liberty® Herbicide on corn may be made with over-the-top broadcast or drop nozzles from emergence until corn is 24" tall or in the V-7 stage of growth, i.e., 7 developed collars, whichever comes first. For corn 24" to 36" tall, only apply Liberty® using ground application and drop nozzles and avoid spraying into the whorl or leaf axils of the corn stalks.

Applications of Liberty® Herbicide on soybeans may be made from emergence to the bloom growth stage.

Liberty® Herbicide is rainfast 4 hours after application to most weed species. Rainfall within 4 hours may necessitate retreatment or may result in reduced weed control. Applications should be made between dawn and two hours before sunset to avoid the possibility of reduced control of lambsquarters and velvetleaf. Do not apply when wind causes drift to off-site vegetation as injury may occur. 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 drought, cool temperatures, or extended periods of cloudiness.

Apply Liberty® Herbicide at rates of 28 to 34 fluid ounces per acre. Refer to the *Rate Recommendation Tables for Weed Control* for selection of the proper rate dependent upon weed species and size. A repeat application of Liberty® or a tank mix application with a residual herbicide selected from the tank mix partners listed on this label will be needed to control weeds that have not yet emerged at the time of application.

#### RESTRICTIONS TO THE DIRECTIONS FOR USE ON FIELD CORN, SILAGE CORN AND SOYBEANS

- 1. **DO NOT** apply more than two applications of Liberty® Herbicide to the corn or the soybean crop. DO NOT apply more than 62 fluid ounces of Liberty® per acre on corn or soybeans per growing season.
- 2. **DO NOT** apply Liberty® Herbicide within 60 days of harvesting corn forage and within 70 days of harvesting corn grain and corn fodder.
- 3. DO NOT apply Liberty® Herbicide within 70 days of harvesting soybean seed.
- 4. **DO NOT** plant rotation crops in a field treated with Liberty® Herbicide within 120 days after the last application of this product with the exception of wheat, barley, buckwheat, millet, oats, rye, sorghum, and triticale which may be planted 70 days after the last application of this product. Corn and soybeans may be planted at any time.
- 5. DO NOT harvest treated green soybean plants for forage and hay feed for livestock.
- 6. DO NOT use nitrogen solutions as spray carriers. A silicone-based antifoam agent may be added if needed.
- 7. **DO NOT** apply Liberty® Herbicide if soybeans or corn show injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- 8. DO NOT apply this product through any type of irrigation system.
- 9. Volunteer LibertyLink® crop plants from the previous season will not be controlled by an application of Liberty® Herbicide.

#### SPRAY ADDITIVES

For use on corn only, Liberty<sup>®</sup> Herbicide must be applied with ammonium sulfate (AMS). It is recommended to use only fine feed grade or spray grade AMS at 3 pounds per acre (17 lbs/100 gallons). However, the rate of AMS can be reduced to 1.5 pounds per acre (8.5 lbs/100 gallons) under hot environmental conditions to reduce potential leaf burn.

Liberty® Herbicide is formulated to provide optimum herbicidal performance. Use of additional surfactants or crop oils will not enhance weed control.

#### MIXING INSTRUCTIONS

Liberty® Herbicide must be applied with properly calibrated and clean equipment. Liberty® is specially formulated to mix readily in water. Prior to adding Liberty® 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*).

Mix Liberty® Herbicide with water to make a finished spray solution as follows:

- 1. Fill the spray tank half full with water.
- 2. Start agitation.
- 3. Prepare a slurry of the proper amount of dry flowable/wettable powder tank mix partners in a small amount of water.
- 4. Add the slurry of dry materials to the spray tank.
- 5. Add the appropriate amount of ammonium sulfate (AMS) (for corn use only) to the spray tank.
- 6. Add the proper amount of liquid tank mix partners.
- 7. Complete filling the spray tank with water.
- 8. Add the proper amount of Liberty® Herbicide and continue agitation.
- 9. If foaming occurs, use a silicone-based antifoam agent.

Ensure that all spray system lines including pipes, booms, etc. have the correct concentration of Liberty® Herbicide/water mixture before the application is started. Flush out any remaining air or water from the spray system lines before starting the crop application. Keep bypass line on or near bottom of tank to minimize foaming. Screen size in nozzles or line strainers should be no finer than 50 mesh.

If tank mix partners recommended on this label are added, maintain good 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.

#### APPLICATION METHOD

Refer to the *Rate Recommendation Tables for Weed Control* in the following section for the proper application rates. Uniform, thorough spray coverage is important to achieve consistent weed control.

Ground Application: Liberty® Herbicide should be applied broadcast in a minimum of 15 gallons of water per acre. Under dense weed/crop canopies, 20 to 40 gallons of water per acre should be used so that thorough spray coverage will be obtained.

Apply Liberty® Herbicide using 80-degree or 110-degree flat-fan nozzles. Select a spray pressure between 30 to 60 pounds per square inch (psi) measured at the nozzle which will achieve a droplet size of about 300 microns. If Turbo TeeJet® spray tips are used, a spray pressure of 60 or more pounds per square inch will be required to get thorough coverage of the weed foliage. Flood-jet nozzles, raindrop nozzles, controlled droplet application equipment, or air-assisted spray equipment do not provide adequate coverage characteristics; and therefore, are not recommended because weed control is likely to be reduced.

DO NOT apply when winds are gusty or when conditions will favor movement of spray particles off the desired spray target. To avoid drift and insure consistent weed control, apply Liberty® Herbicide with the spray boom as low as possible while maintaining a uniform spray pattern. For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy.

#### RATE RECOMMENDATION TABLES FOR WEED CONTROL IN CORN AND SOYBEANS

Apply Liberty® Herbicide at rates of 28 to 34 fluid ounces per acre. Rates in ounces of formulated product per acre for the control of weeds at selected heights are shown in the following tables. In weed populations with mixed species, apply at a rate needed for the species that requires the highest rate.

	Maximum Weed Height or Diameter		
Weed Species	(Inches)		
	28 Fl. Oz./A	32 <sup>1</sup> FI. Oz./A	34 FI. Oz./A
Barnyardgrass	**	3	4
Bluegrass, annual	**	3	4
Corn, volunteer	**	10 <sup>1,2</sup>	12 <sup>1,2</sup>
Crabgrass, large	**	3 <sup>3</sup>	4 <sup>3</sup>
Crabgrass, smooth	**	3 <sup>3</sup>	4 <sup>3</sup>
Cupgrass, woolly	4	6	8
Foxtail, bristly	3	6	8
Foxtail, giant	3	6	8
Foxtail, giant (ALS resistant)	3	6	8
Foxtail, green	3	6	8
Foxtail, robust purple	3	6	8
Foxtail, yellow	**	3 <sup>3</sup>	4 <sup>3</sup>
Johnsongrass, seedling	2	6	8
Millet, wild-proso	2	6	7
Millet, proso volunteer	2	6	7
Oat, wild	**	3 <sup>3</sup>	4 <sup>3</sup>
Panicum, fall	2	3	4
Panicum, Texas	2	4	5
Rice, red	2	4	5
Sandbur, field	**	**	3 <sup>3</sup>
Shattercane	**	6	8
Shattercane (ALS resistant)	**	6	8
Signalgrass, broadleaf	2	4	5
Sprangletop	2	4	5
Sorghum, volunteer	**	6	7
Stinkgrass	2	4	5
Witchgrass	2	4	5

\*\* Indicates suppression

Volunteer corn arising from a previous corn crop containing a glufosinate tolerance gene will not be controlled.

<sup>2</sup> A timely cultivation 7 to 10 days after application and/or retreatment within 2 weeks is recommended for controlling dense clumps of volunteer corn arising from a previous corn crop that was not tolerant to glufosinate-ammonium.

<sup>3</sup> Yellow foxtail, field sandbur, crabgrass and wild oats must be treated prior to tiller initiation for best results.

	Maximum Weed Height or Diameter		
Weed Species	(Inches)		
	28 Fl. Oz./A	32 FI. Oz./A	34 FI. Oz./A
Amaranth, Palmer <sup>1</sup>	**	4	6
Beggarweed, Florida	**	4	6
Black medic	3	5	6
Buckwheat, wild	3	6	7
Buffalobur	3	6	7
Burcucumber	3	6	8
Carpetweed	**	4	6
Chickweed, common	3	6	7
Cocklebur, common	3	6	8
Cocklebur, common (ALS resistant)	3	6	8
Copperleaf, hophornbeam	2	4	6
Eclipta	2	4	6
Fleabane, annual	3	6	8
Galinsoga, hairy	3	6	8
Galinsoga, small flower	3	6	7
Groundcherry, cutleaf	2	4	6
Geranium, cutleaf	2	4	6
Java bean	2	4	6
Jimsonweed	3	6	8
Kochia <sup>1</sup>	2	4	6
Kochia (ALS resistant)1	2	4	6
Ladysthumb	3	6	8
Lambsquarters, common <sup>1</sup>	2	4	6
Lambsquarters, common (triazine resistant)	2	4	6
Mallow, common	**	4	6
Mallow, Venice	3	6	7
Marestail	3	6	8
Marshelder	**	4	6
Morningglory, entireleaf <sup>1</sup>	2	6	7
Morningglory, ivyleaf <sup>1</sup>	3	6	7
Morningglory, pitted <sup>1</sup>	2	6	7
Morningglory, smallflower <sup>1</sup>	2	4	6
Morningglory, tall <sup>1</sup>	3	6	7
Mustard, wild	3	6	7
Nightshade, eastern black	3	6	8
Nightshade, hairy	3	6	8
Pennycress	2	4	6
Pigweed, redroot <sup>1</sup>	2	4	6
Pigweed, redroot (ALS resistant) <sup>1</sup>	2	4	6
Pigweed, redroot (triazine resistant)	2	4	6

# Broadleaf Weeds Controlled with Liberty® Herbicide Plus Ammonium Sulfate

	Maximum Weed Height or Diameter		
Weed Species	(Inches)		
	28 Fl. Oz./A	32 Fl. Oz./A	34 FI. Oz./A
Pigweed, prostrate <sup>1</sup>	**	4	6
Pigweed, spiny <sup>1</sup>	**	4	6
Pigweed, smooth <sup>1</sup>	**	4	6
Pigweed, tumble <sup>1</sup>	**	4	6
Puncturevine	**	4	6
Ragweed, common	3	6	8
Ragweed, common (ALS resistant)	3	6	8
Ragweed, giant	3	6	8
Ragweed, giant (ALS resistant)	3	6	8
Sesbania, hemp	3	6	8
Shepherd's-Purse	3	6	8
Sicklepod	3	6	7
Sida, prickly	3	6	7
Smartweed, Pennsylvania	3	6	8
Smellmelon	2	4	6
Sowthistle, annual	3	6	7
Sunflower, common	3	6	8
Sunflower, common (ALS resistant)	3	6	8
Sunflower, volunteer	3	6	8
Thistle, Russian	**	4	6
Velvetleaf <sup>1</sup>	3	5	6
Waterhemp, common <sup>1</sup>	2	4	6
Waterhemp, common (ALS resistant) <sup>1</sup>	2	4	6
Waterhemp, tall <sup>1</sup>	2	4	6

\*\* indicates suppression

<sup>1.</sup> Tank mixing with atrazine may enhance weed control of this species.

# INSTRUCTIONS FOR BIENNIAL/PERENNIAL WEEDS

Liberty® Herbicide applied at 34 fluid ounces per acre will provide top-growth control or suppression of the biennial/perennial weed species shown in the following table. A second application of Liberty Herbicide at 28 fluid ounces per acre or a tank mix with other herbicides selected from those listed on this label is required for control.

# Biennial/Perennial Weeds Suppressed or Controlled with Liberty® Herbicide Plus Ammonium Sulfate

Alfalfa	Clover, red	Muhly, wirestem
Artichoke, Jerusalem	Dandelion	Orchardgrass
Bindweed, field	Dock, smooth	Poinsettia, wild
Bindweed, hedge	Dogbane, hemp	Pokeweed
Bluegrass, Kentucky	Goldenrod, gray	Quackgrass
Bromegrass, smooth	Johnsongrass, rhizome	Thistle, bull
Burdock	Milkweed, common	Thistle, Canada
Chickweed, Mouse-ear	Milkweed, honeyvine	Timothy
Clover, Alsike		

#### TANK MIX RECOMMENDATIONS FOR LIBERTY® HERBICIDE

Liberty® Herbicide (alone and with a tank mix partner listed on this label) may be applied following any corn or soybean pre-plant incorporated or preemergence herbicide applications. When using Liberty® Herbicide in tank mix combinations, carefully follow the "Direction of Use" labeling of the selected partner. Do not use a tank mix partner that has already been applied as a pre-plant incorporated or preemergence herbicide unless the "Directions of Use" labeling of that partner allows sequential applications of it to the same crop.

#### Corn Tank Mix Herbicide Partners for Liberty® Herbicide

To enhance weed control and/or provide residual control in corn, Liberty® Herbicide may be mixed with the following herbicides.

2,4-D	Confidence® Herbicide	NorthStar <sup>™</sup> Herbicide
Accent® Herbicide	Confidence® Xtra 5.6L Herbicide	Permit® Herbicide
Accent® Gold <sup>™</sup> Herbicide	Distinct <sup>™</sup> Herbicide	Prowl® 3.3 EC Herbicide
Atrazine	Dual II Magnum™ Herbicide	Pursuit® Herbicide
Banvel® Herbicide	Exceed® Herbicide	Python® WDG Herbicide
Basagran® Herbicide	Frontier® 6.0 Herbicide	Scorpion® III Herbicide
Basis Gold® Herbicide	FulTime™ Herbicide	Shotgun® Herbicide
Beacon® Herbicide	Guardsman® Herbicide	Spirit <sup>®</sup> Herbicide
Bicep Lite II Magnum® Herbicide	Harness ® Herbicide	Sterling <sup>™</sup> Plus
Bicep II Magnum® Herbicide	Harness® Xtra Herbicide	Stinger® Herbicide
Buctril® Herbicide	Harness® Xtra 5.6L Herbicide	Surpass® EC Herbicide
Buctril® 4EC Herbicide	Hornet® Herbicide	Surpass® 100 Herbicide
Buctril® + atrazine Herbicide	Laddok® S-12 Herbicide	Topnotch™ Herbicide
Callisto™ Herbicide	LeadOff™ Herbicide	Tough® 5 EC Herbicide
Celebrity™ Herbicide	Lightning <sup>™</sup> Herbicide	Volley™ Herbicide
Clarity® Herbicide	Marksman® Herbicide	

Apply tank mixes of Lightning<sup>™</sup> and Pursuit<sup>®</sup> only to corn designated as Clearfield<sup>™</sup> tolerant and LibertyLink<sup>®</sup> or warranted by Bayer CropScience as being tolerant to Liberty<sup>®</sup> Herbicide.

Applications of 2,4-D, Banvel® Herbicide, Celebrity<sup>™</sup> Herbicide, Clarity® Herbicide, Distinct<sup>™</sup> Herbicide, or Marksman® Herbicide, and NorthStar<sup>™</sup> Herbicide to corn during periods of rapid growth may result in temporary leaning or green snap. If these symptoms occur, cultivation should be delayed until after corn is growing normally to avoid breakage. Tank mixing with Prowl® 3.3 EC Herbicide may result in reduced control of barnyardgrass, fall panicum, field sandbur, yellow foxtail, and volunteer corn.

#### Corn Tank Mix Insecticide Partners for Liberty® Herbicide

To provide weed and insect control in corn, Liberty® Herbicide may be mixed with the following insecticides:

Ambush® Insecticide	Furadan® 4F Insecticide	Pounce® 3.2EC Insecticide
Asana® XL Insecticide	Lorsban® 4E Insecticide	Warrior™ Insecticide
Baythroid® 2 Insecticide		

Soybean Tank Mix Herbicide Partners for Liberty® Herbicide

To enhance weed control and/or provide residual control in soybeans, Liberty® Herbicide may be mixed with the following herbicides:

Basagran® Herbicide	Manifest™ B Herbicide	Reflex® Herbicide
Blazer® Herbicide	Manifest™ G Herbicide	Resource® Herbicide
Firstrate® Herbicide	Pinnacle® Herbicide	Scepter® Herbicide
Flexstar® HL Herbicide	Poast® HC Herbicide	Select® 2EC Herbicide
Frontier® 6.0 Herbicide	Poast Plus® Herbicide	Storm <sup>®</sup> Herbicide
Fusilade® DX Herbicide	Prism® Herbicide	Tornado® Herbicide
Fusion® Herbicide	Pursuit® Herbicide	Typhoon® Herbicide
Galaxy® Herbicide	Raptor™ Herbicide	

# APPLICATION DIRECTIONS FOR USE IN FIELD CORN SEED AND SOYBEAN SEED PROPAGATION

Liberty® Herbicide may be applied to select out susceptible "segregates", i.e., corn and soybean plants that are not tolerant to glufosinate-ammonium during seed propagation. Inbred lines, plants not possessing glufosinate-ammonium tolerance, will be severely injured or killed if treated with this herbicide. A hooded sprayer may be used to protect corn and soybean plants from coming into contact with the herbicide application.

#### **Rate Recommendations for Seed Production**

Corn: For the selection of tolerant corn "segregates", Liberty® Herbicide may be applied at up to 34 fluid ounces per acre plus ammonium sulfate (AMS) at 3 pounds per acre when corn is in the V-3 to V-4 stage of growth, i.e., 3 to 4 developed collars. A second treatment of 28 fluid ounces per acre plus AMS at 3 pounds per acre may be applied when the corn is in the V-6 to V-7 stage of growth or up to 24" tall.

Soybeans: For the selection of tolerant soybean "segregates", Liberty® Herbicide may be applied at up to 34 fluid ounces per acre when soybean is in the third trifoliate stage. A second treatment of 28 fluid ounces per acre may be applied up to the bloom growth stage of soybean.

# FALLOW FIELDS OR POST HARVEST

Liberty® Herbicide may be used as a substitute for tillage to control or suppress weeds in the grass, broadleaf and biennial/perennial weed tables in this label. Applications may be made in fallow fields, post harvest, prior to planting or emergence of any crop listed on this label.

Refer to the *Application Methods* section of this labeling for appropriate application rates to control specific weeds. Liberty® Herbicide must be applied with ammonium sulfate. Tank mixes with 2,4-D, glyphosate or atrazine are recommended with Liberty® Herbicide to enhance total weed control. When using Liberty® Herbicide in tank mix combinations, follow the precautions and directions of use of the most restrictive label.

Do not plant crops in a field treated with Liberty® Herbicide for 120 days after the last application of this product with the exception of wheat, barley, buckwheat, millet, oats, rye, sorghum, and triticale which may be planted 70 days after the last application of this product. Corn, soybeans, sugar beets and canola may be planted at any time.

# FARMSTEADS

When applied as recommended, this product controls undesirable plant vegetation in noncrop areas around farmstead building foundations, shelter belts, along fences, and general nonselective farmstead weed control. Refer to the *Application Methods* section of this labeling for appropriate application rates to control specific weeds.

# **IMPORTANT: READ BEFORE USE**

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

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