

PM 23

45639-199

12-7-99

1 of 20

Mr. Victor A. Dorr  
Agrevo USA Company  
Little Falls Centre One  
2711 Centerville Road  
Wilmington, DE 19808

DEC - 7 1999

Dear Mr. Dorr:

Subject: Liberty® Herbicide

EPA Registration No. 45639-199

Application and Letter December 1, 1999; and Resubmission  
Letter Dated December 7, 1999: Request To Amend  
Registration by Revising Labeling as Described in the  
December 1, 1999 Letter and Re-Revised Labeling  
Submitted with Your Letter Dated December 7, 1999

The proposed labeling submitted with your letter of December 7, 1999 has been reviewed and found acceptable as an amendment to the registration of the subject pesticide product under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, provided that you:

- o Submit one (1) copy of the final printed labeling prior to shipment of the subject pesticide product under the enclosed stamped label.

If this condition is not complied with, the registration will be subject to cancellation in accordance with FIFRA, section 6(e). Your release for shipment of the product constitutes acceptance of this condition.

A stamped copy of the proposed label is enclosed for your records.

Sincerely yours,

Joanne I Miller  
Product Manager (23)  
Herbicide Branch  
Registration Division (7505C)

| CONCURRENCES |            |         |          |  |  |  |  |
|--------------|------------|---------|----------|--|--|--|--|
| SYMBOL       | E. Wilson: | Ignite: | 12-07-99 |  |  |  |  |
| SURNAME      |            |         |          |  |  |  |  |
| DATE         |            |         |          |  |  |  |  |

2 of 20

Edition #78: December 4, 1999  
(Master Label Version - Includes Aerial Application & California Weed Table)

# LIBERTY® HERBICIDE

**A SELECTIVE HERBICIDE FOR USE ONLY ON CORN AND SOYBEANS TOLERANT TO THE ACTIVE INGREDIENT IN THIS PRODUCT. AGREVO USA COMPANY RECOMMENDS USE ONLY ON SEED DESIGNATED AS LIBERTYLINK® OR WARRANTED BY AGREVO USA COMPANY AS BEING TOLERANT TO LIBERTY HERBICIDE**

|   |         |
|---|---------|
| ACTIVE INGREDIENT:                                  |         |
| Glufosinate-ammonium† (CAS Number 77182-82-2) ..... | 18.19%* |
| OTHER INGREDIENTS .....                             | 81.81%  |
| TOTAL 100.00%                                       |         |

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

† Protected by U.S. Patent No 4,400,196

**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.)

EPA Registration Number 45639-199      EPA Establishment Numbers: 45639-MI-001  
407-IA-2

Net Contents: 1 Gallon, 2.5 Gallons, 15 Gallons, 60 Gallons, 120 Gallons & Bulk



ACCEPTED  
with COMMENTS  
In EPA Letter Dated  
DEC - 7 1999  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
45639-199

AgrEvo USA Company  
Little Falls Centre One  
2711 Centerville Road  
Wilmington, DE 19808

## FIRST AID

- If Swallowed:** Rinse mouth thoroughly with plenty of water. Do **NOT** induce vomiting. Get medical attention immediately.
- If in Eyes:** Flush with plenty of water. Get medical attention if irritation persists.
- If on Skin:** Remove contaminated clothing. Wash skin immediately with plenty of soap and water. Get medical attention.
- If Inhaled:** Remove individual to fresh air. Get medical attention if breathing difficulty develops.

### 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. **Additionally, call 1-800-471-0660 immediately for further information.**

|   |
|---|
| <b>IN CASE OF MEDICAL, ENVIRONMENTAL, OR TRANSPORTATION<br/>EMERGENCIES OR INQUIRIES, CALL 1-800-471-0660 (24 HOURS/DAY).</b> |
|---|

For product inquiry information, call toll free: 1-877-GO LIBERTY [1-877-465-4237] or visit the LibertyLink worldwide web site at [www.liberty-link.com](http://www.liberty-link.com)

## 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<sup>®</sup>  $\geq 14$  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, 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.

**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, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

**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 be between 32°F and 85°F, with a maximum of 125°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.

## 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

#### Field Corn, Silage Corn and Soybeans

Liberty Herbicide is a water-soluble herbicide intended for application as a foliar spray for the control of a broad spectrum of emerged annual and perennial grass and broadleaf weeds in corn and soybeans. This product is for use only on corn and soybeans tolerant to the active ingredient in this product. AgrEvo USA Company recommends use only on seed designated as LibertyLink or warranted by AgrEvo USA Company as being tolerant to Liberty Herbicide. The basis of selectivity of Liberty Herbicide in corn and soybeans is the presence of a gene in LibertyLink or other AgrEvo warranted corn hybrids and soybean varieties which results in a plant that is tolerant to the active ingredient of Liberty Herbicide.

**IMPORTANT CROP SAFETY INFORMATION  
READ BEFORE USING THIS PRODUCT**

Liberty Herbicide is for use only on corn and soybeans tolerant to the active ingredient in this product. AgrEvo USA Company recommends use only on seed designated as LibertyLink or warranted by AgrEvo USA Company as being tolerant to Liberty Herbicide.

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

Use of Liberty Herbicide on corn and soybeans not designated as LibertyLink or not warranted by AgrEvo 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 or soybeans 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 and soybeans or other corn hybrids or soybean varieties warranted by AgrEvo.

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

**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. A cultivation may be made **at least** 5 days before a Liberty application or 5 days after a Liberty application.

**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. Liberty will have an effect on weeds that are larger than the recommended leaf stage, however, speed of activity and control may be reduced. 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. Position drop nozzles over the row centers.

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, and 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 16 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 appropriate residual herbicides will be needed to control weeds that have not yet emerged at the time of application.

#### **RESTRICTIONS TO THE DIRECTIONS FOR USE**

1. DO NOT apply more than two applications of Liberty Herbicide to the corn or soybean crop. DO NOT exceed 62 ounces of Liberty 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 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 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 add any surfactants or crop oils. DO NOT use nitrogen solutions as spray carriers. Antifoams 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 Herbicide must be applied with ammonium sulfate (AMS).** Use only fine feed grade or spray grade AMS at 3 pounds per acre or 17 pounds per 100 gallons of water. Do not add any surfactants or crop oils. Antifoams may be added if needed.

## 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*).

Liberty Herbicide must be mixed 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 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 an 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.

If tank mix partners 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. 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.

## CLEANING INSTRUCTIONS

Before mixing Liberty Herbicide, thoroughly clean nurse tanks, spray tank, lines and filter, particularly if a herbicide with the potential to injure crops was previously used. Spray equipment should be thoroughly rinsed using a strong detergent solution.

After using Liberty Herbicide, triple rinse sprayer and use a commercial tank cleaner before using for crops not labeled LibertyLink or warranted by AgrEvo. Make sure any rinsate or foam is thoroughly removed from spray tank and boom. Rinsate may be disposed of in a holding tank or in noncrop areas that do not contain desirable vegetation.

## APPLICATION METHODS

Uniform, thorough spray coverage is important to achieve consistent weed control. For best results, use flat-fan nozzles with medium size droplets at or about 300 microns. Do not use flood-jet nozzles, controlled droplet application equipment, or air-assisted spray equipment.

**Ground Application:** Refer to the *Rate Recommendation Tables for Weed Control* in the following section for the 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. DO NOT apply at ground speeds exceeding 12 mph. 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.

The use of 80-degree or 110-degree flat-fan nozzles is highly recommended for optimum spray coverage and canopy penetration. Use a spray pressure of 30 to 60 pounds per square inch (measured at the nozzle). If using Turbo TeeJet® spray tips, use a minimum pressure of 60 pounds per square inch so that thorough spray coverage will be obtained.

**Aerial Application:** Use at least 28 fluid ounces of Liberty Herbicide per acre for aerial application. Poor coverage will result in reduced weed control. Liberty Herbicide should be applied in a minimum of 5 gallons per acre with spray nozzle tips and sufficient pressure to provide a uniform pattern and median droplet size of 300 to 350 microns. DO NOT use raindrop nozzles. Aerial applications with this product should be made at a maximum height of 10 feet above the crop with low drift nozzles at a maximum pressure of 40 psi.

Avoid application during conditions when uniform coverage cannot be obtained or where excessive spray drift may occur. Do not apply when wind causes drift to off-site vegetation.

**RATE RECOMMENDATION TABLES FOR WEED CONTROL**

Apply Liberty Herbicide at rates of 16 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.

**Grass Weeds Controlled with Liberty Herbicide at  
16 Fluid Ounces/Acre Plus Ammonium Sulfate**

| Weed Species     | Maximum<br>Weed Height<br>or Diameter<br>(Inches) |
|------------------|---|
| Cupgrass, woolly | 3   |

**Grass Weeds Controlled with  
Liberty Herbicide Plus Ammonium Sulfate**

| Weed Species                   | Maximum Weed Height or Diameter<br>(Inches) |                           |                 |
|--------------------------------|---|---------------------------|-----------------|
|                                | 20 Fl. Oz./A                                | 28 <sup>1</sup> Fl. Oz./A | 34 Fl. Oz./A    |
| Barnyardgrass                  | *   | 3                         | 4               |
| Bluegrass, annual              | *   | 3                         | 4               |
| Corn, volunteer                | *   | 10 <sup>2</sup>           | 12 <sup>2</sup> |
| Crabgrass, large               | *   | 3                         | 4               |
| Crabgrass, smooth              | *   | 3                         | 4               |
| Cupgrass, woolly               | 3   | 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               |
| 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

- <sup>1</sup> 24 fluid ounces per acre will provide equivalent weed control as 28 fluid ounces per acre when applied to weeds in moderate to light infestations. Light infestations may occur when a preemergent herbicide had previously been applied.
- <sup>2</sup> Volunteer corn arising from a previous corn crop containing a glufosinate tolerance gene will not be controlled. A timely cultivation 7 to 10 days after application and/or retreatment within 2 weeks is recommended for controlling dense clumps of volunteer corn.
- <sup>3</sup> Yellow foxtail and wild oats must be treated prior to tiller initiation for best results.

**Broadleaf Weeds Controlled with  
Liberty Herbicide Plus Ammonium Sulfate**

| Weed Species                                  | Maximum Weed Height or Diameter<br>(Inches) |                           |              |
|---|---|---------------------------|--------------|
|   | 20 Fl. Oz./A                                | 28 <sup>1</sup> Fl. Oz./A | 34 Fl. Oz./A |
| Amaranth, Palmer <sup>2</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<br>(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>2</sup>                           | 2   | 4                         | 6            |
| Kochia (ALS resistant) <sup>2</sup>           | 2   | 4                         | 6            |
| Ladysthumb                                    | 3   | 6                         | 8            |
| Lambsquarters, common <sup>2</sup>            | 2   | 4                         | 6            |
| Lambsquarters, common<br>(triazine resistant) | 2   | 4                         | 6            |
| Mallow, common                                | *   | 4                         | 6            |
| Mallow, Venice                                | 3   | 6                         | 7            |
| Marestail                                     | 3   | 6                         | 8            |
| Marshelder                                    | *   | 4                         | 6            |
| Morningglory, entireleaf <sup>2</sup>         | 2   | 6                         | 7            |
| Morningglory, ivyleaf <sup>2</sup>            | 3   | 6                         | 7            |
| Morningglory, pitted <sup>2</sup>             | 2   | 6                         | 7            |
| Morningglory, smallflower <sup>2</sup>        | 2   | 4                         | 6            |
| Morningglory, tall <sup>2</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>2</sup>                 | 2   | 4                         | 6            |
| Pigweed, redroot (ALS resistant) <sup>2</sup> | 2   | 4                         | 6            |

| Weed Species                                      | Maximum Weed Height or Diameter<br>(Inches) |                           |              |
|---|---|---------------------------|--------------|
|   | 20 Fl. Oz./A                                | 28 <sup>1</sup> Fl. Oz./A | 34 Fl. Oz./A |
| Pigweed, redroot<br>(triazine resistant)          | 2   | 4                         | 6            |
| Pigweed, prostrate <sup>2</sup>                   | *   | 4                         | 6            |
| Pigweed, spiny <sup>2</sup>                       | *   | 4                         | 6            |
| Pigweed, smooth <sup>2</sup>                      | *   | 4                         | 6            |
| Pigweed, tumble <sup>2</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<br>(ALS resistant)              | 3   | 6                         | 8            |
| Sunflower, volunteer                              | 3   | 6                         | 8            |
| Thistle, Russian                                  | *   | 4                         | 6            |
| Velvetleaf <sup>2</sup>                           | 3   | 5                         | 6            |
| Waterhemp, common <sup>2</sup>                    | 2   | 4                         | 6            |
| Waterhemp, common<br>(ALS resistant) <sup>2</sup> | 2   | 4                         | 6            |
| Waterhemp, tall <sup>2</sup>                      | 2   | 4                         | 6            |

\* indicates suppression

- <sup>1</sup>. 24 fluid ounces per acre will provide equivalent weed control as 28 fluid ounces per acre when applied to weeds in moderate to light infestations. Light infestations may occur when a preemergent herbicide had previously been applied.
- <sup>2</sup>. Tank mixing with atrazine may enhance weed control of this species.

## INSTRUCTIONS FOR BIENNIAL/PERENNIAL WEEDS

Liberty Herbicide applied at 28 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 or tank mixes with other herbicides is required for control.

### *Biennial/Perennial Weeds Controlled with Liberty Herbicide Plus Ammonium Sulfate*

| Weed Species          | 28 Fluid Ounce/Acre <sup>1</sup> |
|-----------------------|----------------------------------|
| Alfalfa               | ✓                                |
| Artichoke, Jerusalem  | ✓                                |
| Bindweed, field       | ✓                                |
| Bindweed, hedge       | ✓                                |
| Bluegrass, Kentucky   | ✓                                |
| Bromegrass, smooth    | ✓                                |
| Burdock               | ✓                                |
| Chickweed, Mouse-ear  | ✓                                |
| Clover, Alsike        | ✓                                |
| Clover, red           | ✓                                |
| Dandelion             | ✓                                |
| Dock, smooth          | ✓                                |
| Dogbane, hemp         | ✓                                |
| Goldenrod, gray       | ✓                                |
| Johnsongrass, rhizome | ✓                                |
| Milkweed, common      | ✓                                |
| Milkweed, honeyvine   | ✓                                |
| Muhly, wirestem       | ✓                                |
| Orchardgrass          | ✓                                |
| Poinsettia, wild      | ✓                                |
| Pokeweed              | ✓                                |
| Quackgrass            | ✓                                |
| Thistle, bull         | ✓                                |
| Thistle, Canada       | ✓                                |
| Timothy               | ✓                                |

✓ Indicates top-growth control or suppression

<sup>1</sup> A sequential second application at the same rate is required for control.

## RATE RECOMMENDATION TABLE FOR WEED CONTROL IN CALIFORNIA

Apply Liberty Herbicide at rates of 16 to 34 fluid ounces per acre. Rates in ounces of formulated product per acre for the control of weeds in California at selected heights are shown in the following table. In weed populations with mixed species, apply at a rate needed for the species that requires the highest rate.

### Weeds Controlled in California with Liberty Herbicide Plus Ammonium Sulfate

| Weed Species                                  | Maximum Weed Height<br>(inches) |                |                |
|---|---------------------------------|----------------|----------------|
|   | 20 Fl. Oz./A                    | 28 Fl. Oz./A   | 34 Fl. Oz./A   |
| Barnyardgrass                                 | *                               | 3              | 4              |
| Cocklebur, common                             | 8                               | 12             | 14             |
| Cocklebur, common (ALS resistant)             | 8                               | 12             | 14             |
| Foxtail, bristly                              | 4                               | 6              | 8              |
| Foxtail, giant                                | 6                               | 10             | 11             |
| Foxtail, giant (ALS resistant)                | 6                               | 10             | 11             |
| Foxtail, green                                | 6                               | 10             | 11             |
| Foxtail, robust purple                        | 4                               | 6              | 8              |
| Foxtail, yellow                               | *                               | 3 <sup>1</sup> | 4 <sup>1</sup> |
| Henbit  | *                               | 2              | 4              |
| Johnsongrass, seedling                        | 2                               | 6              | 8              |
| Lambsquarters, common                         | 2                               | 4              | 5              |
| Lambsquarters, common<br>(triazine resistant) | 2                               | 4              | 5              |
| Malva, common                                 | *                               | 2              | 4              |
| Morningglory, entireleaf                      | 2                               | 6              | 7              |
| Morningglory, ivyleaf                         | 4                               | 6              | 7              |
| Morningglory, pitted                          | 2                               | 6              | 7              |
| Morningglory, smallflower                     | 2                               | 4              | 5              |
| Morningglory, tall                            | 4                               | 6              | 7              |
| Nettle, burning                               | *                               | 2              | 4              |
| Nightshade, black                             | *                               | 4              | 6              |
| Panicum, fall                                 | 2                               | 3              | 4              |
| Pigweed, redroot                              | 2                               | 4              | 5              |
| Pigweed, redroot (ALS resistant)              | 2                               | 4              | 5              |
| Pigweed, redroot (triazine resistant)         | 2                               | 4              | 5              |
| Pigweed, tumble                               | *                               | 4              | 5              |
| Purslane, common                              | *                               | 2              | 4              |
| Rice, Jungle                                  | *                               | 2              | 4              |
| Sowthistle, annual                            | 3                               | 6              | 7              |
| Sunflower, common                             | 8                               | 12             | 14             |
| Sunflower, common (ALS resistant)             | 8                               | 12             | 14             |
| Sunflower, volunteer                          | 6                               | 8              | 9              |
| Velvetleaf                                    | 3                               | 5              | 6              |

\* indicates suppression

<sup>1</sup> Yellow foxtail must be treated prior to tiller initiation for best results.



## SEQUENTIAL APPLICATIONS WITH LIBERTY HERBICIDE

Liberty Herbicide applied at 20 fluid ounces per acre provides excellent control of many 2-3 inch weeds. For weeds that flush throughout the season, a sequential application of 20 fluid ounces per acre often provides season long control.

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.

## TANK MIX RECOMMENDATIONS FOR LIBERTY HERBICIDE

When using Liberty Herbicide in tank mix combinations, follow the precautions and directions of use of the most restrictive label.

### 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                           | Distinct™ Herbicide          | NorthStar™ Herbicide     |
| Accent® Herbicide               | Dual II Magnum™ Herbicide    | Permit® Herbicide        |
| Accent® Gold™ Herbicide         | Exceed® Herbicide            | Prowl® 3.3 EC Herbicide  |
| Atrazine                        | Frontier® 6.0 Herbicide      | Pursuit® Herbicide       |
| Banvel® Herbicide               | FulTime™ Herbicide           | Python® WDG Herbicide    |
| Basagran® Herbicide             | Guardsman® Herbicide         | Scorpion® III Herbicide  |
| Basis Gold® Herbicide           | Harness® Herbicide           | Shotgun® Herbicide       |
| Beacon® Herbicide               | Harness® Xtra Herbicide      | Spirit® Herbicide        |
| Bicep Lite II Magnum® Herbicide | Harness® Xtra 5.6L Herbicide | Stinger® Herbicide       |
| Bicep II Magnum® Herbicide      | Hornet® Herbicide            | Surpass® EC Herbicide    |
| Buctril® 4EC Herbicide          | Laddok™ S-12 Herbicide       | Surpass® 100 Herbicide   |
| Buctril® + atrazine Herbicide   | LeadOff™ Herbicide           | Topnotch™ Herbicide      |
| Celebrity™ Herbicide            | Lightning™ Herbicide         | Tough® 3.75 EC Herbicide |
| Clarity® Herbicide              | Marksman® Herbicide          |                          |

Apply tank mixes of Lightning and Pursuit only to corn designated as Clearfield™ tolerant and LibertyLink or warranted by AgrEvo USA Company as being tolerant to Liberty Herbicide.

Applications of 2,4-D, Banvel Herbicide, Celebrity Herbicide, Clarity Herbicide, Distinct Herbicide, or Marksman® Herbicide, and NorthStar 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      |

**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® Herbicide      |
| Fusilade® DX Herbicide  | Prism® Herbicide      | Tornado® Herbicide    |
| Fusion® Herbicide       | Pursuit® Herbicide    | Typhoon® Herbicide    |
| Galaxy® Herbicide       | Raptor™ Herbicide     |                       |

**FIELD CORN SEED AND SOYBEAN SEED PRODUCTION**

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 production. 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 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 trifoliolate 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 and soybeans 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.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and should be followed carefully. However, it is impossible to eliminate all risks 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 the manner of use or application, all of which are beyond the control of AgrEvo USA Company. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** AGREVO USA COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of AgrEvo USA Company is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. AgrEvo USA Company disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT AGREVO USA COMPANY'S ELECTION, THE REPLACEMENT OF PRODUCT. .

©AGREVO USA COMPANY, 1996

Liberty, LibertyLink, LibertyLink design, AgrEvo and AgrEvo logo are registered trademarks of Hoechst Schering AgrEvo GmbH.

Prowl, Pursuit, and Scepter are registered trademarks of American Cyanamid. Lightning and Raptor are trademarks of American Cyanamid Company.

Basagran, Banvel, Blazer, Clarity, Frontier, Galaxy, Guardsman, Laddok, Marksman, Poast and Storm are registered trademarks of BASF Corporation. Celebrity, Distinct and Manifest are trademarks of BASF Corporation.

Curtail, Firstrate, Hornet, Lorsban, Python, Scorpion and Stinger are registered trademarks of Dow AgroSciences.

Accent, Asana XL, Basis Gold, Pinnacle and Viton are registered trademarks of DuPont Company. LeadOff is a trademark of DuPont Company.

Furadan and Pounce are registered trademarks of FMC.

Harness is a registered trademark of Monsanto Company.

Permit is a registered trademark of Nissan Chemical Industries, Ltd.

Beacon, Bicep Lite II Magnum, Bicep II Magnum, Exceed, Spirit and Tough are registered trademarks of Novartis Crop Protection, Inc. and Dual II Magnum and NorthStar are trademarks of Novartis Crop Protection, Inc.

Buctril is a registered trademark of Rhône-Poulenc Ag Company.

TurboTeeJet is a registered trademark of Spraying Systems Co.

Shotgun is a registered trademark of UAP.

Cobra, Prism, Resource and Select are registered trademarks of Valent U.S.A. Company.

Ambush, Surpass, Fusilade, Flexstar, Fusion, Reflex, Tornado and Typhoon are registered trademarks of Zeneca Group Co. Fulltime, Topnotch and Warrior are trademarks of Zeneca Group Co.

Code: P991204