

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs Registration Division (7505P) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460

Date of Issuance:

EPA Reg. Number:

5/4/18

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X Registration Reregistration (under FIFRA, as amended) Term of Issuance: Unconditional

Name of Pesticide Product:

Glufosinate 280 Herbicide

Name and Address of Registrant (include ZIP Code):

Jane M. Miller Agent for Gilmore Marketing & Development, Inc. c/o Biologic Consulting, Inc. 115 Obtuse Hill Road Brookfield, CT 06804

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:	Date:
Erik Kraft, Product Manager 24 Fungicide & Herbicide Branch, Registration Division (7505P)	5/4/18

EPA Form 8570-6

- 2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 65656-6."
- 3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

• Basic CSF dated 12/23/2017

If you have any questions, please contact Lisa Pahel by phone at (703) 347-0459, or via email at pahel.lisa@epa.gov

## **GLUFOSINATE 280 Herbicide**

A non-selective herbicide for post emergence broadcast use on canola, corn, cotton, and soybeans designated as LibertyLink®. GLUFOSINATE 280 Herbicide may be used for weed control in conventional cotton when applied with a hooded sprayer in-crop. GLUFOSINATE 280 Herbicide may also be applied as a broadcast burndown application before planting or prior to emergence of any conventional or LibertyLink® variety of canola, corn, sweet corn, cotton, olives, soybean, or sugar beet GLUFOSINATE 280 Herbicide may be used for post emergence weed control in listed tree vine and berry crops. GLUFOSINATE 280 Herbicide may also be applied for potato vine desiccation.

## **ACTIVE INGREDIENT**

Glufosinate ammonium*	24.5%
Other Ingredients	<u>75.5%</u>
Total	

<sup>\*</sup>Equivalent to 2.34 pounds of active ingredient per U. S. gallon

## 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.)

	FIRST AID				
IF ON SKIN OR	Take off contaminated clothing.				
CLOTHING:	Rinse skin immediately with plenty of water for 15-20 minutes.				
	Call a poison control center or doctor for treatment advice.				
IF IN THE	Hold eye open and rinse slowly and gently with water for 15-20 minutes.				
EYES:	Remove contact lenses, if present, after the first 5 minutes, then continue rinsin				
	eye.				
	Call a poison control center or doctor for treatment advice.				
IF	Call a poison control center or doctor immediately for treatment advice.				
SWALLOWED:	Do not give any liquid to the person.				
	Do not induce vomiting unless told to do so by the poison control center or				
	doctor.				
	Do not give anything by mouth to an unconscious person.				

HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL CHEMTREC® TOLL FREE AT 1-800-424-9300.

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.

EPA Reg. No. 65656-X

NET CONTENTS:

MANUFACTURED BY:
Gilmore Marketing & Development, Inc.
6070 Poplar Ave., Suite 710
Memphis, TN 38119

EPA Est. No. xxxxxx-xx-xx

ACCEPTED

05/04/2018

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. OFFICE OF

65656-6

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Revised label per EPA comments 05 02 2018

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

Causes substantial but temporary eye injury. Harmful if absorbed through skin. Harmful if swallowed. Do not get in eyes, on skin, or on clothing.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear

- Long sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate, butyl rubber >14 mils, or Viton<sup>®</sup> >14 mils
- Shoes and socks
- Protective eyewear (goggles, face shield or safety glasses).

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 exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Wear a minimum of a NIOSH approved filtering face piece respirator with any N filter (TC-84A). You can also use other NIOSH approved particulate respirators that offer more protection. For more information, see www.epa.gov/pesticiderespirators.

#### **USER SAFETY RECOMMENDATIONS**

#### Users should:

- 1. Wash hands before eating drinking chewing gum using tobacco or using the toilet
- 2. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing
- 3. 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.

#### **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.

#### **ENVIRONMENTAL HAZARDS**

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 wash waters or rinsate.

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 runoff is recommended.

## **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 New York Only: Not for Use in Nassau and Suffolk Counties.

#### 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 for all post-application activities, with the following exceptions:

- The REI for scouting activities in canola, corn, and soybeans is 4 days.
- The REI for workers to move irrigation piping is 7 days for all crops.

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 (goggles face shield or safety glasses); and for overhead exposure, chemical resistant headgear

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170), The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. The application for trimming and edging, industrial, recreational and public areas, and farmsteads are not within the scope of the WPS.

Keep children and pets out of treated areas until sprays have dried.

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

GLUFOSINATE 280 Herbicide may be applied as a burndown treatment prior to planting or prior to emergence of any conventional or LibertyLink® variety of canola, corn, sweet corn, cotton, olive, soybean, or sugar beet.

Post emergence weed control applications of GLUFOSINATE 280 Herbicide may be made only to LibertyLink® crops including canola, corn, sweet corn, soybeans, and cotton. To the extent consistent with applicable law, Gilmore Marketing & Development Inc. does not warrant the use of this product on crops other than those designated as LibertyLink® to safely withstand the application of GLUFOSINATE 280 Herbicide.

The basis of selectivity of GLUFOSINATE 280 Herbicide in crops is the presence of a gene in LibertyLink® crops which results in a plant that is not sensitive to the active ingredient of GLUFOSINATE 280 Herbicide. Crops not containing this gene will be sensitive to GLUFOSINATE 280 Herbicide and crop injury or death may occur. Do not allow spray to contact foliage or green tissue of desirable vegetation other than crops containing the LibertyLink® trait.

GLUFOSINATE 280 Herbicide may be applied to conventional cotton using a hooded sprayer.

During applications to trees, vines and berries: Avoid contact of GLUFOSINATE 280 Herbicide solution spray drift or mist with green bark stems or foliage, as injury may occur. Only trunks with callused mature brown bark should be sprayed unless protected from spray contact by nonporous wraps, grow tubes or waxed containers. Contact of GLUFOSINATE 280 Herbicide with parts of trees, berries or vines other than mature brown bark can result in serious damage.

#### PRODUCT INFORMATION

GLUFOSINATE 280 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 canola, corn, cotton and soybean designated as LibertyLink® and in trees, vines and berries. GLUFOSINATE 280 Herbicide may be applied for potato vine desiccation. GLUFOSINATE 280 Herbicide may also be applied as a broadcast burndown application before planting or prior to emergence of any conventional or LibertyLink® canola, sweet corn, corn, cotton, olive, soybean or sugar beet.

GLUFOSINATE 280 Herbicide is only foliar active with little or no activity in soil. Weeds that emerge after application will not be controlled. Apply GLUFOSINATE 280 Herbicide to actively growing weeds as described in the Weed Control Directions for Row Crops section to get maximum weed control. Uniform thorough spray coverage is necessary to achieve consistent weed control. Necrosis of leaves and young shoots occur within 2 to 4 days after application under good growing conditions.

- GLUFOSINATE 280 Herbicide 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.
- Applications should be made between dawn and two hours before sunset to avoid the possibility of reduced lambsquarters and velvetleaf control.
- Consult your local Cooperative Extension Service or Gilmore Marketing & Development Inc. representative for guidelines on the optimum application timing for GLUFOSINATE 280 Herbicide in your region.
- 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 such as 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.

#### **ROTATIONAL CROP RESTRICTIONS\***

Rotational crop planting intervals following application of GLUFOSINATE 280 Herbicide 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, Sweet Corn, Corn, Cotton, Soybeans and Sugar beets	0 days		
	May be planted at any time		
Root and Tuber Vegetables Leafy Vegetables Brassica Leafy Vegetables and Small Grains (barley buckwheat oats rye teosinte triticale and	70 Days		
All Other Crops	180 Days		

<sup>\*</sup>See **Application Directions for Potato Vine Desiccation** for Rotational Crop Restrictions specifically after GLUFOSINATE 280 Herbicide applications to potatoes

#### WEED RESISTANT MANAGEMENT SECTION

Glufosinate-ammonium, the active ingredient in this product, is a Group 10 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 10 herbicides. Such resistant weed plants may not be effectively managed using Group 10 herbicides but may be effectively managed utilizing another herbicide alone or in mixtures from a different Group and/or by using cultural or mechanical practices. However, a herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides. Consult your local company representative, state cooperative extension service, professional consultants or other qualified authorities to determine appropriate actions for treating specific resistant weeds.

If levels of control provided by applications of this product is reduced and cannot be accounted for by factors such as misapplication, abnormal levels of target species or extremes of weather, it may be the case that target species have developed a strain resistant to applications of Glufosinate 280 SL Herbicide. If resistance develops, Glufosinate 280 SL Herbicide may not provide sufficient control of target species. If suspected weed resistance is observed in a particular weed species, contact your retailer representative or call Gilmore Marketing & Development, Inc.

Suspected herbicide resistant weeds may be identified by these indicators:

- 1. Failure to control a weed species normally controlled by the herbicide applied at specified application rates, especially if control is achieved on adjacent weeds.
- 2. The spreading of a patch of a particular weed species that survives a herbicide application; and
- 3. Surviving plants mixed with controlled individuals of the same species.

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of this product or other Group 10 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target—weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which—active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical
  information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control
  methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the
  crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.

- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistancemanagement and/or integrated weed-management recommendations for specific crops and weed biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. Do not assume that each listed weed is being controlled by this mechanism of action. Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled.

#### Integrated Weed Management

The active ingredient in GLUFOSINATE 280 Herbicide is glufosinate ammonium which is a glutamine synthetase inhibitor (Group 10). Integrated weed management guidelines promote an economically viable environmentally sustainable and socially acceptable weed control program regardless of the herbicide(s) used.

The highlights of a successful integrated weed management include:

- 1. Correctly identify weeds and look for trouble areas within field to identify resistance indicators
- 2. Rotate crops.
- 3. Start the growing season with clean fields.
- 4. Rotate herbicide modes of action by using multiple modes of action during the growing season and apply no more than two applications of a single herbicide mode of action to the same field in a two-y e a r period. One method to accomplish this is to rotate herbicide trait systems.
- 5. Apply listed rates of herbicides to actively growing weeds at the correct time with the right application.
- 6. Control any weeds that may have escaped the herbicide application.
- 7. Thoroughly clean field equipment between fields.

Contact your local agronomic advisor for more specific information on integrated weed management for your area.

#### WEED CONTROL FOR ROW CROPS

Rates in ounces of formulated product per acre for the control of weeds at selected heights are shown in the weed control tables. In weed populations with mixed species apply at a rate needed for the species that requires the highest rate.

## **Broadleaf Weed Control**

Maximum Weed Height or Diameter (inches)			Maximum Weed Height or Diameter (inches)			
Weed Species	22 fl. oz./A	29 fl. oz./A	Weed Species	22 fl. oz./A	29 fl. oz./A	
· 		(0.53 lb. AI/A)		(0.40 lb. AI/A)	(0.53 lb. AI/A)	
Amaranth, Palmer <sup>2</sup>	NR	4	Morningglory, smallflower <sup>2</sup>	4	6	
Anoda, spurred	3	5	Morningglory, tall <sup>2</sup>	6	8	
Beggarweed, Florida	4	5	Mustard, wild	4	6	
Black medic	5	7	Nightshade, black	4	6	
Blueweed, Texas	5	7	Nightshade, eastern black	6	8	
Buckwheat, wild	6	7	Nightshade, hairy	6	8	
Buffalobur	6	7	Pennycress, (stinkweed)	4	6	
Burcucumber	6	10	Pigweed, redroot <sup>2</sup>	3	4	
Catchweed, bedstraw (cleavers)	2	4	Pigweed, prostrate <sup>2</sup>	3	4	
Carpetweed	4	6	Pigweed, spiny <sup>2</sup>	3	4	
Chickweed, common	6	8	Pigweed, smooth <sup>2</sup>	3	4	
Cocklebur, common	6	14	Pigweed tumble <sup>2</sup>	3	4	
Copperleaf, hophornbeam	4	6	Puncturevine	4	6	
Cotton, volunteer <sup>1</sup>	6	8	Purslane, common	2	4	
Croton, tropic	3	5	Pusley, Florida	S	3	
Croton, woolly	2	4	Ragweed, common	6	10	
Eclipta	4	6	Ragweed, giant	6	12	
Devils claw	2	4	Senna, coffee	4	6	
Fleabane annual	6	8	Sesbania hemp	6	8	
Galinsoga, hairy	6	8	Shepherd's Purse	6	8	
Galinsoga, small flower	6	7	Sicklepod (java bean)	4	6	
Groundcherry, cutleaf	4	5	Sida prickly	4	5	
Geranium, cutleaf	4	6	Smartweed, Pennsylvania	6	14	
Hempnettle	4	6	Smellmelon	4	6	
Horsenettle, Carolina <sup>3</sup>	2	4	Sowthistle annual	6	8	
Jimsonweed	6	10	Soybeans, volunteer <sup>1</sup>	6	8	
Knotweed	3	5	Spurge, prostrate	2	4	
Kochia <sup>2</sup>	4	6	Spurge, spotted	2	4	
Ladysthumb	6	14	Starbur, bristly	4	6	
Lambsquarters common <sup>2</sup>	4	6	Sunflower, common	6	14	
Mallow, common	4	6	Sunflower, prairie	3	5	
Mallow, Venice	6	8	Sunflower, volunteer	6	10	
Marestail	S	6 - 12	Thistle, Russian <sup>3</sup>	S	6 - 12	
Marshelder, annual	4	6	Velvetleaf <sup>2</sup>	3	4	
Morningglory, entireleaf <sup>2</sup>	6	8	Waterhemp, common <sup>2</sup>	NA	5	
Morningglory, ivyleaf <sup>2</sup>	6	8	Waterhemp, tall <sup>2</sup>	NA	5	
Morningglory, pitted <sup>2</sup>	6	8				
Morningglory, sharppod <sup>2</sup>	2	4				
NA - Not Advised	l l					

NA - Not Advised

S - Indicates suppression

<sup>1</sup> Volunteer Liberty Link crops from the previous season will not be controlled 2 For applications to corn tank mixing with atrazine may enhance weed control in this species 3 May require sequential applications for control

## **Grass Weed Control**

Maximum Weed H	leight or Diame	ter (inches)	Maximum Weed Height or Diameter (inches)			
Weed Species		29 fl. oz./A <sup>ab</sup>	Weed Species	22 fl. oz./A		
	(0.40 lb. AI/A)	(0.53 lb. AI/A)		(0.40 lb. AI/A)	(0.53 lb. AI/A)	
Barley, volunteer <sup>3</sup>	3	4	Millet, wild proso	6	7	
Barnyardgrass	3	5	Millet, proso volunteer	6	7	
Bluegrass, annual	3	5	Oat, wild <sup>2</sup>	3	4	
Corn, volunteer <sup>1</sup>	10	12	Panicum, fall	3	5	
Crabgrass, large <sup>2</sup>	3	5	Pamcum, Texas 4		6	
Crabgrass, smooth <sup>2</sup>	3	5	Rice, red	4	6	
Cupgrass, woolly	6	12	Rice, volunteer <sup>1</sup>	4	6	
Foxtail, bristly	6	8	Sandbur, field <sup>2</sup>	S	2	
Foxtail, giant	6	12	Shattercane	6	8	
Foxtail, green	6	12	Signalgrass, broadleaf	3	5	
Foxtail, robust purple	6	8	Sprangletop	4	6	
Foxtail, yellow <sup>2</sup> 3 4		4	Sorghum, volunteer	6	8	
Goosegrass <sup>3</sup>	2	3	Stinkgrass	4	6	
Johnsongrass, Seedling 3 5		Wheat, Volunteer <sup>2</sup> 4		5		
Junglerice	3	5	Witchgrass 4		6	

a In cotton GLUFOSINATE 280 Herbicide may be applied at 29 fl. oz./A (0.53 lb. AI/A) three times per year.

b Do not apply more than 22 fl. oz./A (0.40 lb. AI/A) of GLUFOSINATE 280 Herbicide post emergence in a single application to canola and corn.

## S - Indicates suppression

<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 and/or retreatment 10-21 days after the first application is advised for controlling dense clumps of volunteer corn.

<sup>&</sup>lt;sup>2</sup> For best control of yellow foxtail field sandbur crabgrass and wild oats treat prior to tiller initiation.

<sup>&</sup>lt;sup>3</sup>A seguential application may be necessary for control.

#### Biennial and Perennial Weeds\*\*

Tank mix partners or sequential applications of GLUFOSINATE 280 Herbicide as directed (22 fl. oz./A followed by 22 fl. oz./A) for control of the biennial and perennial weeds listed below:

Alfalfa Clover, Alsike Nutsedge, purple\* Artichoke, Jerusalem Clover, red Nutsedge, vellow\* Dandelion Orchardgrass Bermudagrass Bindweed, field Dock, smooth Poinsettia, wild Bindweed, hedge Dogbane hemp\* Pokeweed Bluegrass, Kentucky Goldenrod gray\* Quackgrass\*

Blueweed, Texas Johnsongrass rhizome Sowthistle, perennial

Bromegrass, smooth Milkweed, common\* Thistle, bull Burdock Milkweed, honeyvine\* Thistle, Canada Bursage, woolyleaf Muhly, wirestem\* Timothy\*

Chickweed Nightshade, silverleaf Wormwood, biennial

Mouse ear

\*Suppression Only

#### APPLICATION AND MIXING PROCEDURES

Uniform thorough spray coverage is important to achieve consistent weed control.

## Ground application

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 GLUFOSINATE 280 Herbicide with the spray boom as low as possible while maintaining a uniform spray pattern. GLUFOSINATE 280 Herbicide should be applied broadcast in a minimum of 10 gallons of water per acre using a minimum spray pressure of 40 psi 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. DO NOT use raindrop nozzles. Boom height should be based on nozzle manufacturer recommendations. See the **Spray Drift Management** section of this label for additional information on proper application of GLUFOSINATE 280 Herbicide.

#### Aerial Application

Poor coverage will result in reduced weed control. For optimal weed control apply GLUFOSINATE 280 Herbicide in a minimum of 10 gallons per acre. Apply GLUFOSINATE 280 Herbicide using nozzles and pressures that generate MEDIUM to COARSE spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1. See the **Spray Drift Management** section of this label for additional information on proper application of GLUFOSINATE 280 Herbicide.

<sup>\*\*</sup>See the **Application Directions for Use on Cotton** section of this label for additional use rates.

#### **COMPATIBILITY TESTING**

If GLUFOSINATE 280 Herbicide 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. oz. of a liquid tank mix partner to be applied per acre add 0.5 teaspoon to the jar.
- 4. For each 16 fl. oz. of GLUFOSINATE 280 Herbicide 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.

#### MIXING INSTRUCTIONS

#### **Tank Mix Instructions**

GLUFOSINATE 280 Herbicide 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 limitations and precautions. No label dosage rates may be exceeded. GLUFOSINATE 280 Herbicide cannot be mixed with any product containing a label prohibition against such mixing. Refer to the specific crop section for rates and other restrictions.

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 limitations 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.

GLUFOSINATE 280 Herbicide must be applied with properly calibrated and clean equipment. GLUFOSINATE 280 Herbicide is formulated to mix readily in water. Prior to adding GLUFOSINATE 280 Herbicide to the spray tank ensure that the spray tank is thoroughly clean particularly if an herbicide with the potential to injure crops was previously used (see **Cleaning Instructions**).

Mix GLUFOSINATE 280 Herbicide with water to make a finished spray solution as follows:

- 1. Fill the spray tank half full with water.
- 2. Start agitation.
- 3. 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.
- 4. Add the appropriate amount of ammonium sulfate (AMS) to the spray tank.
- 5. If mixing with a liquid tank mix partner add the liquid mix partner next.
- 6. Complete filling the spray tank with water.
- 7. Add the proper amount of GLUFOSINATE 280 Herbicide and continue agitation.
- 8. If foaming occurs use a silicone-based antifoam 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 advised 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 re-suspend 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.

#### CLEANING INSTRUCTIONS

Before using GLUFOSINATE 280 Herbicide thoroughly clean bulk storage tank refillable tank nurse tanks spray tank lines and filter particularly if an herbicide with the potential to injure crops was previously used. Equipment should be thoroughly rinsed using a commercial tank cleaner.

After using GLUFOSINATE 280 Herbicide triple rinse the spray equipment and clean with a commercial tank cleaner. 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.

## SPRAY DRIFT MANAGEMENT

Spray drift may result in injury to non-target crops or vegetation. To avoid spray drift, do not apply when wind speed is greater than 10 MPH or during periods of temperature inversions. Do not apply when weather conditions, wind speed, or wind direction may cause spray drift to non-target areas. AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

- All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.
- For all non-aerial applications, wind speed must be measured adjacent to the application site, on the upwind side, immediately prior to application.

## MANDATORY SPRAY DRIFT MITIGATION

- When applying to crops via aerial application equipment, the spray boom must be mounted on the aircraft so as to minimize drift caused by wing tip or rotor blade vortices. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- When applying to crops via aerial application equipment, applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
- For aerial applications, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.
- For ground applications and aerial applications, select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1.
- 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. 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.
- For non-crop vegetation management ground applications, apply with the nozzle height no more than 4 feet above the ground or target vegetation, unless necessitated by the application equipment. Examples would include roadside, railroad, utility rights of way, forestry and other industrial vegetation management applications where safety or natural barriers obstruct application.

#### SPRAY DRIFT ADVISORIES

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

#### POLLINATOR ADVISORY STATEMENT

This product contains an 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.

#### IMPORTANCE OF 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. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. 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** sections of this label.

#### Controlling Droplet Size – Ground Boom

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

#### Controlling Droplet Size – Aircraft

- Number of Nozzles Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations. AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.
- Nozzle Type Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- Boom Length Longer booms increase drift potential. Therefore a shorter boom length is recommended.
- Application Height Application more than 10 ft. above the canopy increases the potential for spray drift.

## **BOOM HEIGHT**

Setting the boom at the lowest referenced height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### WIND

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.

Note: Local terrain can influence wind patterns. Every applicator needs to be familiar be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

#### TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature 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 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.

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

#### APPLICATION DIRECTIONS FOR BURNDOWN USE

GLUFOSINATE 280 Herbicide may be applied as a burndown treatment prior to planting or prior to emergence of conventional or LibertyLink® canola, corn, sweet corn, cotton, soybean, sugar beet.

Apply a minimum of 29 fl. oz./A (0.53 lb. AI/A) of GLUFOSINATE 280 Herbicide for burndown of existing weeds just prior to planting or prior to emergence of canola, corn, cotton, soybean or sugar beets. For best results apply to emerged young actively growing weeds. Warm temperatures high humidity and bright sunlight improve the performance of GLUFOSINATE 280 Herbicide. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. Make only one burndown application.

- In cotton: If environmental conditions prevent timely applications a single application may be made of up to 43 fl. oz./A (0.79 lb. AI/A) of GLUFOSINATE 280 Herbicide. If more than 29 fl. oz./A (0.53 lb. AI/A) are used in any single application the year total may not exceed 72 fl. oz./A (1.32 lb. AI/A) including all application timings. Make only one burndown application.
- In soybean: If environmental conditions prevent timely applications a single application may be made of up to 36 fl. oz./A (0.66 lb. AI/A) of GLUFOSINATE 280 Herbicide. If 29-36 fl. oz./A (0.53-0.66 lb. AI/A) are used in a single burndown application, one additional in season application may be made at up to 29 fl. oz./A (0.53 lb. AI/A). The year total may not exceed 65 fl. oz./A (1.19 lb. AI/A) including all application timings. Make only one burndown application.
- In canola, corn, and sugar beets: If environmental conditions prevent timely applications a single application may be made of up to 36 fl. oz./A (0.66 lb. AI/A) of GLUFOSINATE 280 Herbicide. No additional applications of GLUFOSINATE 280 Herbicide may be made post emergence to the crop during the application. Make only one burndown application.

	Burndown	In Season Applications (LibertyLink® varieties only)	Year Max
Cotton Use Pattern 1	29 fl. oz./A (0.53 lb. AI/A)	2 applications at 22-29 fl. oz./A* (0.40-0.53 lb. AI/A)	87 fl. oz./A (1.59 lb. AI/A)
Cotton Use Pattern 2	30-43 fl. oz./A (0.55-0.79 lb. AI/A)	1 application at 22-29 fl. oz./A* (0.40-0.53 lb. AI/A)	72 fl. oz./A (1.32 lb. AI/A)
Soybean Use Pattern	29-36 fl. oz./A (0.53-0.66 lb. AI/A)	1 application at 22-29 fl. oz./A** (0.40-0.53 lb. AI/A)	65 fl. oz./A (1.19 lb. AI/A)
Canola Corn Sugar Beets	29-36 fl. oz./A (0.53-0.66 lb. AI/A)	None	36 fl. oz./A (0.66 lb. AI/A)

<sup>\*</sup> LibertyLink® cotton OR with hooded sprayer for non LibertyLink® varieties (see **Cotton** use directions)

#### APPLICATION DIRECTIONS FOR USE ON SUGAR BEETS

THOROUGH SPRAY COVERAGE IS VERY IMPORTANT. GLUFOSINATE 280 Herbicide works best when weeds are actively growing. A cultivation may be made at least 5 days before a GLUFOSINATE 280 Herbicide application or 5 days after a GLUFOSINATE 280 Herbicide application.

#### APPLICATION TIMING

Applications of GLUFOSINATE 280 Herbicide on sugar beets may be made from the cotyledon stage up to the 10-1e a f stage of the sugar beet. GLUFOSINATE 280 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. GLUFOSINATE 280 Herbicide will have an effect on weeds that are larger than the specified 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 GLUFOSINATE 280 Herbicide is rainfast 4 hours after application therefore rainfall within 4 hours may necessitate retreatment.

For best weed control and sugar beet yield GLUFOSINATE 280 Herbicide applications should begin when weeds are up to 1 inch in height or diameter. Repeat applications should be made when newly germinated weeds again reach 1 inch in height or diameter. Refer to the **Rate Tables for Weed Control In Sugar Beets** for selection of the proper rate dependent upon the weed species present and size. A repeat application of GLUFOSINATE 280 Herbicide 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 SUGAR BEETS

- 1. DO NOT apply more than 30 fl. oz./A (0.55 lb. AI/A) of GLUFOSINATE 280 Herbicide in one application.
- 2. DO NOT apply more than 60 fl. oz./A (1.10 lb. AI/A) of GLUFOSINATE 280 Herbicide on the sugar beet crop per year.
- 3. DO NOT apply GLUFOSINATE 280 Herbicide within 60 days of harvesting sugar beets.
- 4. DO NOT plant rotation crops in a field treated with GLUFOSINATE 280 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 designated as LibertyLink® may be planted at any time.
- 5. DO NOT graze the treated crop or cut for hay.

<sup>\*\*</sup> LibertyLink® soybeans only (See **Soybean** use directions)

- 6. DO NOT add surfactants Antifoams or drift control agents may be added if needed.
- 7. DO NOT apply GLUFOSINATE 280 Herbicide if sugar beets 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. DO NOT make more than 2 applications per year. Allow a minimum of 10 days between applications.

#### SUGAR BEET TANK MIX INSTRUCTIONS

GLUFOSINATE 280 Herbicide 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 canola to be treated. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded GLUFOSINATE 280 Herbicide cannot be mixed with any product containing a label prohibition against such mixing.

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 limitations 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.

#### RATE TABLES FOR WEED CONTROL IN SUGAR BEETS

The rate of GLUFOSINATE 280 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 apply the rate needed for all species present.

Grass Weeds Controlled with GLUFOSINATE 280 Herbicide

Weed Species	Growth Stage (Maximum	Height)	Comments on Weed Growth Stage/ Application Timing/ Number of Applications	
	15 fl. oz./A (0.9 Pt./A) (0.27 lb. AI/A)	20 fl. oz./A (1.25 Pt./A) (0.37 lb. AI/A)	Number of Applications	
Barley, volunteer	1 - 2 leaf (2")	3 leaf (3")	Multiple applications may be required	
Barnyardgrass	1 - 3 leaf (2")	4 - 5 leaf (3")	Maximum of 1 tiller	
Corn, volunteer	1 - 2 leaf (3")	3 - 4 leaf (6")		
Crabgrass, large	1 - 3 leaf (2")	4 - 5 leaf (3")	Maximum of 1 tiller	
Crabgrass, smooth	1 - 3 leaf (2")	4 - 5 leaf (3")	Maximum of 1 tiller	
Cupgrass, woolly	1 - 5 leaf (4")	(8')		
Foxtail, giant	1 - 4 leaf (3")	5 - 6 leaf (4")	Maximum of 2 tillers	
Foxtail, green	1 - 4 leaf (3")	5 - 6 leaf (4")	Maximum of 2 tillers	
Foxtail, yellow	1 - 3 leaf (1")	4 leaf (2")	Apply prior to tillering	
Millet, volunteer proso	1 - 3 leaf (2")	4 - 5 leaf (3")	Maximum of 1 tiller	
Millet, wild proso	1 - 3 leaf (2")	4 - 5 leaf (3")	Maximum of 1 tiller	
Oat, wild	1 - 2 leaf (2")	3 leaf (3")	Maximum of 1 tiller	
Panicum, fall	1 - 3 leaf (2")	4 - 5 leaf (3")	Maximum of 1 tiller	
Panicum, Texas	1 - 3 leaf (2")	4 - 5 leaf (3")	Maximum of 1 tiller	
Sandbur, field		1 - 4 leaf (2")	Apply prior to tillering	
Wheat, volunteer	1 - 2 leaf (2")	3 leaf (3")	Maximum of 1 tiller	

<sup>\*</sup>Apply up to 30 fl. oz./A (1.88 pt./A) (0.55 lb. AI/A) if weeds exceed the growth stage shown in the table

Perennial Weeds Controlled by GLUFOSINATE 280 Herbicide

Weed Species	Growth Stage of Weed* (Maximum Height/Diameter)		Comments on Number of Applications	
	15 fl. oz./A (0.9 Pt./A)	20 fl. oz./A (1.25 Pt./A)		
Quackgrass	(0.27 lb. AI/A)	(0.37 lb. AI/A) 1 - 3 leaf (3")	Multiple applications required	
Sowthistle, perennial	— 1 - 4 leaf (3")		Multiple applications required	
Thistle, Canada	_	1 - 4 leaf (3")	Multiple applications required	

<sup>\*</sup>Apply up to 30 fl. oz./A (1.88 pt./A) if weeds exceed the growth stage shown in the table

Broadleaf Weeds Controlled by GLUFOSINATE 280 Herbicide.

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Wood Coorden	Growth Stage of Weed* (Maximum Diameter)			
Weed Species	15 fl. oz./A	20 fl. oz./A		
	(0.9 pt./A)	(1.25 pt./A)		
	(0.27 lb. AI/A)	(0.37 lb. AI/A)		
Buckwheat wild	1 - 4 leaf (2")	5 - 6 leaf (3")		
Buffalobur	1 - 4 leaf (2")	5- 6 leaf (3")		
Carpetweed		1 - 4 leaf (2")		
Chickweed common	1 - 4 leaf (2")	5 - 6 leaf (3")		
Cocklebur common	1 - 6 leaf (3")	7- 8 leaf (5)		
Kochia	(1")	(2")		
Ladysthumb	1- 2 leaf (1")	3 - 4 leaf (3")		
Lambsquarter common	1 - 2 leaf (1")	4 - 5 leaf (3")		
Mallow Venice	1 - 4 leaf (2")	5 - 6 leaf (3")		
Marshelder	1- 2 leaf (1")	3 - 4 leaf (2")		
Mustard wild	1 - 4 leaf (2")	5 - 6 leaf (3")		
Nightshade eastern black	1 - 4 leaf (2")	5 - 6 leaf (3")		
Pigweed prostrate	(1")	(3")		
Pigweed red root	1 - 2 leaf (1")	3 - 4 leaf (3")		
Pigweed smooth	1 - 2 leaf (1")	3- 4 leaf (3")		
Pigweed spiny	1 - 2 leaf (1")	3- 4 leaf (3")		
Purslane common	(1")	(2")		
Ragweed common	1 - 6 leaf (3")	7- 8 leaf (5')		
Ragweed giant	1 - 4 leaf (2")	5- 6 leaf (3")		
Shepard s purse	1 - 4 leaf (2")	5 - 6 leaf (3")		
Smartweed Pennsylvania	1 - 2 leaf (1")	3- 4 leaf (3")		
Sowthistle annual	1 - 4 leaf (2")	5- 6 leaf (3")		
Sunflower common	1- 6 leaf (3")	7 - 8 leaf (5')		
Thistle Russian	(1")	(2")		
Velvetleaf	1-2 leaf (1")	3 - 4 leaf (3")		

<sup>\*</sup>Apply up to 30 fl. oz./A (1.88 pt./A) (0.55 lb. AI/A) if weeds exceed the growth stage shown in the table.

#### APPLICATION DIRECTIONS FOR USE ON LIBERTYLINK® CANOLA

Apply GLUFOSINATE 280 Herbicide only to canola labeled as LibertyLink<sup>®</sup>. Uniform thorough spray coverage is necessary to achieve consistent weed control.

#### APPLICATION RATE AND TIMING

For best results apply to emerged young actively growing weeds. Warm temperatures high humidity and bright sunlight improve the performance of GLUFOSINATE 280 Herbicide. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. For optimal yield early season weed removal is important.

Applications of GLUFOSINATE 280 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.

Apply GLUFOSINATE 280 Herbicide at 22 fl. oz./A (0.40 lb. AI/A) per application. A second application of GLUFOSINATE 280 Herbicide may be needed to control weeds that have not yet emerged at the time of application.

#### RESTRICTIONS TO THE DIRECTIONS FOR USE ON CANOLA CONTAINING THE LIBERTYLINK® TRAIT

- 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.
- DO NOT apply more than two applications of GLUFOSINATE 280 Herbicide per year. Sequential applications must be at least 10 days apart.
- DO NOT apply GLUFOSINATE 280 Herbicide within 65 days of harvesting canola.
- DO NOT apply more than 44 fl. oz./A (0.80 lb. AI/A) of GLUFOSINATE 280 Herbicide per year.
- DO NOT apply more than 22 fl. oz./A (0.40 lb. AI/A) per application.
- If GLUFOSINATE 280 Herbicide was used in a burndown application, no post emergence applications may be applied to the crop.
- DO NOT graze the treated crop or cut for hay.
- DO NOT apply GLUFOSINATE 280 Herbicide if canola shows injury from prior herbicide applications or environmental stress (drought excessive rainfall, etc.).
- DO NOT apply this product through any type of irrigation system.
- Refer to the **Rotational Crop Restrictions** section under the Information heading of this label for the appropriate rotational crop plant back intervals.

#### SPRAY ADDITIVES

GLUFOSINATE 280 Herbicide must be applied with ammonium sulfate (AMS). Use only fine feed grade or spray grade AMS at 3 pounds per acre. Anti-foams or drift control agents may be added if needed. Use of additional surfactants or crop oils may increase risk of crop response.

#### LIBERTYLINK® CANOLA TANK MIX INSTRUCTIONS

GLUFOSINATE 280 Herbicide 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 canola to be treated. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded GLUFOSINATE 280 Herbicide cannot be mixed with any product containing a label prohibition against such mixing.

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 limitations 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.

#### APPLICATION RATE AND TIMING FOR LIBERTYLINK® CANOLA SEED PROPAGATION

Up to three applications of GLUFOSINATE 280 Herbicide at up to 22 fl. oz./A (0.40 lb. AI/A) per application may be made to LibertyLink® canola for seed propagation. Applications may be made from the cotyledon stage up to the early bolting stage (e.g., BBCH 18 – 30, between just prior to stem elongation/bolting, eight or more leaves and beginning of stem elongation, no internodes).

#### RESTRICTIONS TO THE DIRECTIONS FOR LIBERTYLINK® CANOLA FOR SEED PROPAGATION

- DO NOT apply more than three applications of GLUFOSINATE 280 Herbicide at up to 22 fl. oz./A per
   ( 0 . 4 0 | b . A I / A ) application per year.
- DO NOT apply more than 66 fl. oz./A (1.21 lb. AI/A) of GLUFOSINATE 280 Herbicide per year.
- DO NOT apply GLUFOSINATE 280 Herbicide beyond the early bolting stage or within 65 days of harvesting canola seed.
- DO NOT use treated canola seed for food, feed or oil purposes.
- DO NOT apply GLUFOSINATE 280 Herbicide if canola shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- DO NOT apply this product through any type of irrigation system.

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#### APPLICATION DIRECTIONS FOR USE ON LIBERYLINK® SWEET CORN

Apply GLUFOSINATE 280 Herbicide only to sweet corn labeled as LibertyLink<sup>®</sup>. Uniform thorough spray coverage is necessary to achieve consistent weed control.

#### APPLICATION TIMING FOR SWEET CORN

Applications for GLUFOSINATE 280 Herbicide on sweet corn may be made from emergence until sweet corn is 24" tall or in the V 7 stage of growth (i.e. 7 developed collars whichever comes first). Apply at a rate of 20 fl. oz./A. (0.37 lb. AI/A) GLUFOSINATE 280 Herbicide must be applied with ammonium sulfate (AMS) for use on sweet corn. Two applications of GLUFOSINATE 280 Herbicide can be made to sweet corn in a year.

#### RESTRICTIONS TO THE DIRECTIONS FOR USE ON SWEET CORN

- DO NOT apply GLUFOSINATE 280 Herbicide within 50 days of harvesting sweet corn ears and within 55 days of harvesting stover.
- DO NOT apply more than 40 fl. oz./A (0.73 lb. AI/A) of GLUFOSINATE 280 Herbicide on sweet corn per year.
- DO NOT apply more than 20 fl. oz./A (0.37 lb. AI/A) of GLUFOSINATE 280 Herbicide per application.
- DO NOT apply more than two applications of GLUFOSINATE 280 Herbicide to the sweet corn crop per year. Sequential applications need to be at least 10 days apart.
- If GLUFOSINATE 280 Herbicide was used in a burndown application, no post emergence applications may be applied to the crop.
- DO NOT use nitrogen solutions as spray carriers.
- DO NOT apply GLUFOSINATE 280 Herbicide if corn shows injury from prior herbicide applications or environmental stress (drought excessive rainfall, etc.).
- DO NOT apply this product through any type of irrigation system.

A silicone-based antifoam agent may be added if needed.

Refer to the **Rotational Crop Restrictions** section under the **Product Information** heading of this label for the appropriate rotational crop plant back intervals.

See **Application Directions for Use on Field Corn and Silage Corn** for Application Methods. Mixing Instructions and Weed Control Tables.

#### SWEET CORN TANK MIX INSTRUCTIONS

Certain herbicide tank mixes may aid in the performance of GLUFOSINATE 280 Herbicide. No additional surfactant is needed with any tank mix partner. GLUFOSINATE 280 Herbicide 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 corn to be treated. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded. GLUFOSINATE 280 Herbicide cannot be mixed with any product containing a label prohibition against such mixing.

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 limitations 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.

#### APPLICATION DIRECTIONS FOR USE ON LIBERTYLINK® FIELD CORN AND SILAGE CORN

Apply GLUFOSINATE 280 Herbicide only to corn labeled as LibertyLink<sup>®</sup> Uniform thorough spray coverage is necessary to achieve consistent weed control.

#### APPLICATION RATE AND TIMING

For best results apply to emerged young actively growing weeds. Warm temperatures high humidity and bright sunlight improve the performance of GLUFOSINATE 280 Herbicide. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. For optimal yield, early season weed removal is important.

Applications of GLUFOSINATE 280 Herbicide on corn may be made with over the top broadcast or drop nozzles from emergence until corn is 24 inches tall or in the V 7 stage of growth (i. e. 7 developed collars whichever comes first). For corn 24 inches to 36 inches tall only apply GLUFOSINATE 280 Herbicide using ground application and drop nozzles and avoid spraying into the whorl or leaf axils of the corn stalks. Applications of GLUFOSINATE 280 Herbicide following the use of soil applied insecticides will not injure corn.

Apply GLUFOSINATE 280 Herbicide at 22 fl. oz./A (0.40 lb. AI/A) per application. A second application of GLUFOSINATE 280 Herbicide or a tank mix application with a residual herbicide 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 AND SILAGE CORN

- DO NOT apply GLUFOSINATE 280 Herbicide within 60 days of harvesting corn forage and within 70 days of harvesting corn grain and corn fodder.
- DO NOT apply more than two applications of GLUFOSINATE 280 Herbicide to the corn crop per year. Sequential applications need to be at least 10 days apart.
- DO NOT apply more than 22 fl. oz./A (0.40 lb. AI/A) of GLUFOSINATE 280 Herbicide per application
- DO NOT apply more than 44 fl. oz./A (0.80 lb. AI/A) of GLUFOSINATE 280 Herbicide on corn per year.

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- If GLUFOSINATE 280 Herbicide was used in a burndown application, no post emergence applications may be applied to the crop.
- DO NOT use nitrogen solutions as spray carriers.
- DO NOT apply GLUFOSINATE 280 Herbicide if corn shows injury from prior herbicide applications or environmental stress (drought excessive rainfall, etc.).
- DO NOT apply this product through any type of irrigation system.

A silicone based antifoam agent may be added if needed.

Refer to the **Rotational Crop Restrictions** section under the Information heading of this label for the appropriate rotational crop plant back intervals.

#### SPRAY ADDITIVES

For corn and sweet corn GLUFOSINATE 280 Herbicide must be applied with ammonium sulfate (AMS). It is advised to use only fine feed grade or spray grade AMS at 3 lbs. per acre (17 lbs./100 gallons). When temperatures exceed 85° F the rate of AMS can be reduced to 1.5 lbs. per acre (8.5 lbs./100 gallons) to reduce potential leaf burn.

Use of additional surfactants or crop oils may increase risk of crop response.

#### FIELD AND SILAGE CORN TANK MIX INSTRUCTIONS

Certain herbicide tank mixes may aid in the performance of GLUFOSINATE 280 Herbicide. No additional surfactant is needed with any tank mix partner. GLUFOSINATE 280 Herbicide 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 corn to be treated. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded. GLUFOSINATE 280 Herbicide cannot be mixed with any product containing a label prohibition against such mixing.

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 limitations 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.

#### APPLICATION DIRECTIONS FOR USE ON COTTON

Uniform thorough spray coverage is necessary to achieve consistent weed control. GLUFOSINATE 280 Herbicide may be applied as a broadcast over the top post emergence spray or as a directed spray only to LibertyLink® cotton. This product may be applied post emergence to cotton varieties or cultivars by using equipment designed to minimize contact of the spray with the cotton foliage. See the **Application Methods on Cotton** section for selection of shielding equipment. Severe injury or death may result if the GLUFOSINATE 280 Herbicide contacts the foliage or stems of cotton NOT labeled as LibertyLink®.

#### APPLICATION RATE AND TIMING

For best results apply to emerged young actively growing weeds. Warm temperatures, high humidity and bright sunlight improve the performance of GLUFOSINATE 280 Herbicide. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. For optimal yield, early season weed removal is important.

Apply GLUFOSINATE 280 Herbicide to cotton from emergence up to the early bloom stage at 22 to 29 fl. oz./A (0.40-0.53 lb. AI/A). Should environmental conditions prevent a timely herbicide application a single application of up to 43 fl. oz./A (0.79 lb. AI/A) of GLUFOSINATE 280 Herbicide may be made to cotton. If more than 29 fl.

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oz./A (0.53 lb. AI/A) are used in any single application the yearly total may not exceed 72 fl. oz./A (1.32 lb. AI/A) including all application timings. See **Restrictions to the Directions for use on Cotton** below for additional information.

Refer to the Weed Control Table for Row Crops section of this label for selection of the proper rate dependent upon weed species present and size. In weed populations with mixed species select the highest rate required to control all the species. Volunteer LibertyLink® crop plants (corn, cotton, soybeans, sugar beets) from the previous season will not be controlled by applications of GLUFOSINATE 280 Herbicide. A repeat application of GLUFOSINATE 280 Herbicide or tank mixes with a residual herbicide will be needed to control weeds that have not emerged at the time of application. See the **Tank Mix Instructions for Use on Cotton** to select suitable tank mix partners.

Use Pattern	1 <sup>st</sup> Application	2 <sup>nd</sup> Application	3 <sup>rd</sup> Application	Year Maximum
Option 1	22 - 29 fl. oz./A (0.40-0.53 lb. AI/A)	22 - 29 fl. oz./A (0.40-0.53 lb. AI/A)	22 - 29 fl. oz./A (0.40-0.53 lb. AI/A)	87 fl. oz./A (1.59 lb. AI/A)
Option 2	30 - 43 fl. oz./A (0.55-0.79 lb. AI/A)	22 - 29 fl. oz./A (0.40-0.53 lb. AI/A)	None	72 fl. oz./A (1.32 lb. AI/A)

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

- DO NOT apply GLUFOSINATE 280 Herbicide to cotton in Florida South of Tampa (Florida Route 60) or in Hawaii except for test plots or breeding nurseries.
- DO NOT apply GLUFOSINATE 280 Herbicide within 70 days prior to cotton harvest.
- Up to three applications of GLUFOSINATE 280 Herbicide may be made to cotton per year at a maximum application rate of 29 fl. oz./A (0.53 lb. AI/A) including burndown.
- DO NOT apply more than 87 fl. oz. (1.59 lb. AI) (including burndown) to cotton per year under this application scenario. Sequential applications need to be at least 10 days apart.
- If environmental conditions prevent timely applications resulting in large weeds or heavy infestations a single application of GLUFOSINATE 280 Herbicide at up to 43 fl. oz./A (0.79 lb. AI/A) may be made to cotton. DO NOT apply more than 43 fl. oz. (0.79 lb. AI) of GLUFOSINATE 280 Herbicide in a single application under this use scenario. If a single application greater than 29 fl. oz. (0.53 lb. AI) is made a subsequent application not to exceed 29 fl. oz. (0.53 lb. AI) may be made to cotton. The yearly total use rate under this scenario may not exceed 72 fl. oz. (1.32 lb. AI) of GLUFOSINATE 280 Herbicide (including burndown). Sequential applications need to be at least 10 days apart.
- DO NOT apply this product through any type of irrigation system.
- Refer to the **Rotational Crop Restrictions** section under the Information heading of this label for the appropriate rotational crop plant back intervals.

#### APPLICATION METHODS TO LIBERTYLINK® COTTON

Refer to the Weed Control Table for Row Crops to select the proper application rate based upon the weeds present and their size. Uniform and thorough spray coverage is required to achieve consistent weed control. For ground application apply GLUFOSINATE 280 Herbicide to LibertyLink® cotton as an over the top foliar spray or as a spray directed to the lower one third of the cotton stand.

#### APPLICATION METHODS TO COTTON

Application of GLUFOSINATE 280 Herbicide to cotton varieties not labeled as LibertyLink® 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
Row w

#### POST HARVEST

GLUFOSINATE 280 Herbicide may be applied as a post-harvest burndown treatment to fields (after cotton harvest). Up to 43 fl. oz./A (0.79 lb. AI/A) of GLUFOSINATE 280 Herbicide may be applied in a single application to control larger weeds growing in the crop at the time of harvest.

If more than 29 fl. oz./A (0.53 lb. AI/A) is used in a single application the yearly total may not exceed 72 fl. oz./A (1.32 lb. AI/A) including all application timings. Refer to the **Rotational Crop Restrictions** section of this label for appropriate rotational crop information.

#### COTTON TANK MIX INSTRUCTIONS

Certain tank mixes may aid in the performance of GLUFOSINATE 280 Herbicide. No additional surfactant is needed with any tank mix partner GLUFOSINATE 280 Herbicide 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 cotton to be treated. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded GLUFOSINATE 280 Herbicide cannot be mixed with any product containing a label prohibition against such mixing.

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 limitations 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.

#### APPLICATION DIRECTIONS FOR USE ON LIBERTYLINK® SOYBEANS,

Apply GLUFOSINATE 280 Herbicide only to soybean designated as LibertyLink<sup>®</sup>. Uniform thorough spray coverage is necessary to achieve consistent weed control.

#### APPLICATION RATE AND TIMING

For best results apply to emerged young actively growing weeds. Warm temperatures high humidity and bright sunlight improve the performance of GLUFOSINATE 280 Herbicide. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. Adding ammonium sulfate with GLUFOSINATE 280 Herbicide may improve weed control if weeds are under stress. For optimal yield early season weed removal is important.

Applications of GLUFOSINATE 280 Herbicide on soybeans may be made from emergence up to but not including the bloom growth stage.

Apply GLUFOSINATE 280 Herbicide to LibertyLink® soybeans from emergence up to but not including the bloom growth stage at 22 to 29 fl. oz./A (0.40-0.53 lb. AI/A). See weed chart to determine rate. If environmental conditions prevent a timely herbicide application, a single application of up to 36 fl. oz./A (0.66 lb. AI/A) of GLUFOSINATE 280 Herbicide may be made to soybeans followed by one additional application at a maximum of 29 fl. oz./A (0.53 lb. AI/A) with a yearly maximum of 65 fl. oz./A (1.19 lb. AI/A). GLUFOSINATE 280 Herbicide may be applied alone or in a tank mix application with a residual herbicide to control weeds that have not yet emerged at the time of application.

Although timely post applications of GLUFOSINATE 280 Herbicide can provide complete weed control, residual herbicides at burndown planting or tank mixed with GLUFOSINATE 280 Herbicide help ensure optimal weed management particularly if environmental conditions delay timely post applications. Residual herbicides can also reduce early season weed competition and are a key element of good weed resistance management practices.

Use Pattern Rate Ranges					
1 <sup>st</sup> Application	2 <sup>nd</sup> Application	Year Maximum			
22 - 36 fl. oz./A	22 - 29 fl. oz./A	65 fl. oz./A			
(0.40-0.66 lb. AI/A)	(0.40-0.53 lb. AI/A)	(1.19 lb. AI/A)			

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

- DO NOT apply GLUFOSINATE 280 Herbicide within 70 days of harvesting soybean seed.
- DO NOT apply more than 65 fl. oz./A (1.19 lb. AI/A) of GLUFOSINATE 280 Herbicide on soybeans per year

- (including burndown).
- DO NOT apply more than 36 fl. oz./A (0.66 lb. AI/A) of GLUFOSINATE 280 Herbicide in a single application.
- DO NOT graze the treated crop or cut for hay.
- DO NOT make more than 2 in-season applications of Glufosinate 280 Herbicide per year (3 applications per year including burndown).
- DO NOT use nitrogen solutions as spray carriers. A silicone-based antifoam agent may be added if needed.
- DO NOT apply GLUFOSINATE 280 Herbicide if soybeans show injury from prior herbicide applications or environmental stress (drought excessive rainfall etc.).
- DO NOT apply this product through any type of irrigation system.
- Refer to the **Rotational Crop Restrictions** section under the Information heading of this label for the appropriate rotational crop plant back intervals.
- Sequential applications need to be at least 5 days apart.

#### SOYBEAN TANK MIX INSTRUCTIONS

Certain herbicide tank mixes may complement GLUFOSINATE 280 Herbicide. No additional surfactant is needed with any tank mix partner. GLUFOSINATE 280 Herbicide 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 soybean to be treated. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded GLUFOSINATE 280 Herbicide cannot be mixed with any product containing a label prohibition against such mixing.

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 limitations 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.

#### APPLICATION DIRECTIONS FOR CANOLA, CORN, COTTON, AND SOYBEAN SEED PROPAGATION

GLUFOSINATE 280 Herbicide may be applied to select out susceptible segregates, i.e. canola, corn, cotton and soybean plants that do not carry the LibertyLink® trait during seed propagation.

- Canola GLUFOSINATE 280 Herbicide may also be used in canola seed propagation as a foliar spray to selectively eliminate canola plants that do not carry the LibertyLink® trait and as such can be applied to remove susceptible segregates during canola seed propagation. Breeding material not possessing the LibertyLink® trait will be severely injured or killed if treated with this herbicide. See **Application Use Directions for Use on Canola** for use rates and application timing.
- Corn Inbred lines plants not possessing the LibertyLink® trait will be severely injured or killed if treated with this herbicide. A hooded sprayer may be used to protect plants from coming into contact with the herbicide application. For the selection of LibertyLink® corn segregates GLUFOSINATE 280 Herbicide may be applied at 22 fl. oz./A (0.40 lb. AI/A) plus AMS at 3 lb./A (17 lb./100 gallons) when corn is in the V 3 to V-4 stage of growth, i.e. 3 to 4 developed collars. A second treatment of 22 fl. oz./A (0.40 lb. AI/A) plus AMS at 3 lbs./A may be applied when the corn is in the V 6 to V 7 stage of growth or up to 24" tall. Sequential applications must be at least 10 days apart. When temperatures exceed 85° F the rate of AMS can be reduced to 1.5 lbs./A (8.5 lbs./100 gallons) to reduce potential leaf burn.

- Cotton GLUFOSINATE 280 Herbicide may also be used in cotton seed propagation as a foliar spray to selectively eliminate cotton plants that do not carry the LibertyLink® trait and as such can be applied to remove susceptible segregates during cotton seed propagation. Breeding material not possessing the LibertyLink® trait will be severely injured or killed if treated with this herbicide. See **Application Use Directions for Use on Cotton** for use rates and application timing.
- Soybeans For the selection of LibertyLink® soybean segregates GLUFOSINATE 280 Herbicide may be applied at up to 22 to 36 fl. oz./A (0.40-0.66 lb. AI/A) when soybean is in the third trifoliate stage. A second treatment of 22 to 29 fl. oz./A (0.40-0.53 lb. AI/A) may be applied up to but not including the bloom growth stage of soybean. Sequential applications must be at least 5 days apart.

## APPLICATION DIRECTIONS FOR USE ON LISTED TREE, VINE; AND BERRY CROPS

Apply GLUFOSINATE 280 Herbicide to the tree vine and berry crops listed below. Uniform thorough spray coverage is necessary to achieve consistent weed control.

#### **REGISTERED CROPS**

- Bush berries, blueberry, currant, elderberry, gooseberry and huckleberry. Other Berries: Lingonberry, juneberry and Salal.
- Citrus lemon, orange, grapefruit, lime, mandarin, tangerine, tangelo, Calamondin, kumquat, pummelo, citron, citrus hybrids, Tangor and cultivars varieties and/or hybrids of these.
- Olives
- Pome Fruit Apple, pear, crabapple, loquat, Mayhaw, quince, Azarole, Medlar, Tejocote, cultivars varieties and/or hybrids of these.
- Stone Fruit Apricot, cherry, peach, nectarine, plum, capulin, jujube, Sloe, and cultivars varieties and/or hybrids of these.
- Tree Nuts almonds, filberts, hickory nuts, macadamia nuts (bush nuts), pecans, pistachios and walnuts.
- Vineyards all grape varieties (table wine and raisins).

## APPLICATION RATE AND TIMING

For best results apply to emerged young actively growing weeds. Warm temperatures, high humidity and bright sunlight improve the performance of GLUFOSINATE 280 Herbicide. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. Weeds under stress or in dense populations will require application at the highest specified label use rate. Stressed conditions also include prior treatments of other contact or systemic herbicides. Do not retreat these weeds with GLUFOSINATE 280 Herbicide until sufficient regrowth has occurred.

Apply GLUFOSINATE 280 Herbicide as a directed spray to control undesirable vegetation in tree vine and berries listed on this label. Apply as a broadcast banded or spot treatment application depending on the situation to control weeds listed under the heading Weeds Controlled in Tree Vine and Berry crops. Avoid direct spray or drift to desirable vegetation. Regrowth may occur due to the weed stage of growth at application low use rate or environmental conditions. Repeat applications of GLUFOSINATE 280 Herbicide may be necessary to control plants generating from underground parts or seed.

Avoid contact of GLUFOSINATE 280 Herbicide solution spray drift or mist with green bark stems or foliage as injury may occur to trees vines and berries Only trunks with callused mature brown bark should be sprayed unless protected from spray contact by nonporous wraps grow tubes or waxed containers. Contact of GLUFOSINATE 280 Herbicide with parts of trees vines or berries other than mature brown bark can result in serious damage.

**Application Methods for Broadcast Applications** 

Apply GLUFOSINATE 280 Herbicide at the rates listed below for broadcast applications based on weed size and stage of growth.

Weed Size and Stage	GLUFOSINATE 280 Herbicide Rate	
Weeds < 3 in height	48 fl. oz./A (0.88 lb. AIA)	
Weeds < 6 in height pre-tiller grasses	56 fl. oz./A (1.02 lb. AI/A)	
Weeds > 6 in height and/or grasses that have tillered	56 - 82 fl. oz./A (1.02-1.50 lb. AI/A)	

Application Methods for Banded Spray Applications

Banded applications may be used using the following formula to calculate the amount of herbicide needed for orchard or vineyard strip sprays.

<u>Band width in inches</u> x Rate per acre = Amount of herbicide Row width in inches broadcast needed for treatment

Application Methods for Spot or Directed Spray Applications

For spot or directed spray applications by backpack sprayers only (no mechanically pressured handgun applications allowed) mix GLUFOSINATE 280 Herbicide at 1.7 fl. oz. of product per gallon of water. Apply to undesirable vegetation foliage until wet but prior to runoff. Ensure uniform and complete coverage.

Thoroughly clean the sprayer following use. DO NOT make spot or directed spray applications to tree or vine trunk as injury may occur.

## Weeds Controlled in Tree Vine and Berry Crops

	Broadleaf Weeds			
Alkali, sida	Henbit	Pineapple weed		
Ammannia, purple	Jimsonweed	Puncturevine		
Arrowhead, California	Knotweed	Purslane, common		
Buckwheat, wild	Kochia	Radish, wild		
Buffalobur	Lambsquarters, common	Ragweed,		
Burclover	Lettuce, miners	common		
California Carpetweed	Lettuce, prickly	Ragweed, giant		
Chickweed, common	London rocket	Redmaids		
Chinese thornapple	Mallow, common	Shepherd's Purse		
Cocklebur, common	Malva (little mallow)	Smartweed, Pennsylvania		
Copperleaf Virginia	Marestail	Sowthistle, annual		
Cudweed	Mayweed	Spurge, prostrate		
Cutleaf eveningprimrose	Morningglory, entireleaf	Starthistle, yellow		
Dodder	Morningglory, ivyleaf	Sunflower, common		
Eclipta	Morningglory, pitted	Sunflower, prairie		
Fiddleneck	Mullein, turkey	Sunflower, volunteer		
Filaree	Mustard, wild	Swinecress		
Filaree, redstem	Nettle	Thistle, Russian		
Fleabane, annual	Nightshade, black	Turnip, wild		
Goosefoot	Nightshade, eastern black	Velvetleaf		
Gromwell, field	Nightshade, hairy	Vervain		
Groundcherry, cutleaf	Pennycress	Vetch		
Groundsel, common	Pigweed, redroot	Virginia, copperleaf		
	Grass Weeds			
Barnyardgrass	Foxtail, yellow	Sandbur, field		
Bluegrass, annual	Goosegrass	Shattercane		
Bromegrass, ripgut	Johnsongrass, seedling	Sprangletop		
Bromegrass, downy	Junglerice	Stinkgrass		
Canarygrass	Oat, wild	Wheat volunteer		
Chess soft	Panicum, fall	Windgrass		
Crabgrass, large	Panicum, Texas	Witchgrass		
Crabgrass, large Crabgrass, smooth	Rush, toad **	Witchigrass		
,				
Cupgrass, woolly	Ryegrass, annual*			
Foxtail, giant				
Foxtail, green	<u> </u>			
	Biennial and Perennial Weeds	To , .		
Aster, white heath	Fescue	Poison ivy/oak		
Bindweed, field	Goldenrod, gray	Quackgrass		
Bindweed, hedge	Guineagrass	Rocket, yellow		
Bluegrass, Kentucky	Horsetail	Rose, wild		
Bromegrass, smooth Bulrush-	Lovegrass	Rubus sp		
Burdock	Mugwort	Spurge, leafy		
Canada thistle	Mullein, common	Thistle, bull		
Clover, Alsike	Mustard, tansy	Thistle, musk		
Clover, red	Nutsedge, purple	Torpedograss		
	Nutsedge, pulpie Nutsedge, yellow	Vaseygrass		
Clover, white	5 . ,	Woodsorrel		
Dallisgrass	Onion, wild			
Dandelion	Orchardgrass	Yarrow common		
Dock, curly	Paragrass			
dogbane (hemp)	Plantain			
Apply to annual ryegrass prior to 3 inches in height.				

<sup>\*</sup> Apply to annual ryegrass prior to 3 inches in height.

\*\* Indicates Suppression

#### RESTRICTIONS TO THE DIRECTIONS FOR USE ON TREE VINE AND BERRY CROPS

- DO NOT apply more than 164 fl. oz. of GLUFOSINATE 280 Herbicide per acre (3 lbs. AI/A) to berry bushes and stone fruit in a 12-month period.
- DO NOT apply more than 246 fl. oz. (4.5 lbs. AI/A) of this product per acre to tree nuts, vines, pome fruit, citrus and olives in a 12-month period.
- DO NOT make more than 2 applications at a maximum rate of 82 fl. oz. per acre (1.5 lbs. AI/A) per application to berry bushes and stonefruit.
- DO NOT make more than 3 applications at a maximum rate of 82 fl. oz. per acre (1.5 lb. AI/A) per application to tree nuts, vines, pome fruit citrus and olives.
- DO NOT graze harvest and/or feed treated orchard cover crops to livestock.
- DO NOT apply this product through any type of irrigation system.
- DO NOT apply this product aerially to tree berry or vine crops.
- DO NOT apply this product within 14 days of nut fruit berry or grape harvest.
- Applications to citrus, fruits, pome fruits and olives must be a minimum of 14 days apart.
- Applications to stone fruit must be a minimum of 28 days apart.
- DO NOT make spot spray applications to suckers as tree injury may occur.

#### SUCKER CONTROL WITH GLUFOSINATE 280 Herbicide

GLUFOSINATE 280 Herbicide will reduce or eliminate sucker growth when applied to suckers that are young, green and uncallused. For sucker control apply a split application approximately 4 weeks apart at 56 fl. oz./A (1.02 lb. AI/A). Coverage of all sucker foliage is necessary for optimum control. Suckers should not exceed 12 inches in length.

#### TANK MIX PARTNER INSTRUCTIONS

GLUFOSINATE 280 Herbicide does not provide residual weed control or control of unexposed plant parts. Certain herbicide tank mixes may aid in the performance of GLUFOSINATE 280 Herbicide or be added to provide residual herbicide activity. No additional surfactant is needed with any tank mix partner. GLUFOSINATE 280 Herbicide 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 limitations and precautions. No label dosage rates may be exceeded. GLUFOSINATE 280 Herbicide cannot be mixed with any product containing a label prohibition against such mixing.

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 limitations 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.

#### APPLICATION DIRECTIONS FOR POTATO VINE DESICCATION

#### APPLICATION RATE AND TIMING

Apply GLUFOSINATE 280 Herbicide at the beginning of natural senescence of potato vines Apply 21 fl. oz./A (0.38 lb. AI/A). Do not split this application or apply more than one application per harvest. Potato varieties with heavy or dense vines may require an application of another desiccation product to complete vine desiccation.

Thorough coverage of the potato vines to be desiccated is essential. Use a sufficient volume of water (20 to 100 gpa) to obtain a thorough coverage of the potato vines. Vary the gallons of water per acre and the spray pressure as indicated by the density of the potato vines to assure thorough spray coverage. Increase the spray volume to at least 30 gallons of water per acre when the potato vine canopy is dense or under cool Page **28** of **31** 

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and dry conditions. Apply GLUFOSINATE 280 Herbicide with the spray boom as low as possible to achieve thorough coverage of the potato vines for best control and to minimize drift potential.

#### RESTRICTIONS TO THE DIRECTIONS FOR USE IN POTATO VINE DESICCATION

- DO NOT apply more than 21 fl. oz./A (0.38 lb. AI/A) to potato vines per year.
- DO NOT make more than 1 application of GLUFOSINATE 280 Herbicide per year.
- DO NOT harvest potatoes until 9 days or more after application of GLUFOSINATE 280 Herbicide.
- DO NOT apply to potatoes grown for seed.
- Canola, corn, cotton, soybean and sugar beets may be planted at any time after the application of GLUFOSINATE 280 Herbicide as a potato vine desiccant.
- DO NOT plant treated areas to wheat, barley, buckwheat, millet, oats, rye, sorghum and triticale until 30 or more days after an application of GLUFOSINATE 280 Herbicide as a potato vine desiccant.
- DO NOT plant treated areas to crops other than those listed in this use precautions section until 120 or more days after an application of GLUFOSINATE 280 Herbicide as a potato vine desiccant.

#### FALLOW FIELDS OR POST HARVEST

GLUFOSINATE 280 Herbicide may be used as a substitute for tillage in fallow fields to control or suppress weeds listed in the Weed Control for Row Crops section of this label. Applications may be made in fallow fields post-harvest prior to planting or emergence of any crop listed on this label.

Apply GLUFOSINATE 280 Herbicide at 22 or 29 fl. oz./A (0.40-0.53 lb. AI/A) to fallow fields to control specific weeds. GLUFOSINATE 280 Herbicide must be applied with ammonium sulfate.

#### **RESTRICTIONS:**

- Do not apply more than 29 fl. oz./A (0.53 lb. AI/A) GLUFOSINATE 280 Herbicide per application.
- Do not make more than 1 application of GLUFOSINATE 280 Herbicide per year.

Tank mixes with 2-4, D glyphosate or atrazine are a d v i s e d with GLUFOSINATE 280 Herbicide to enhance total weed control. When using GLUFOSINATE 280 Herbicide in tank mix combinations follow the precautions and directions of use of the most restrictive label. See the **Application and Mixing Procedures** section of this label for additional information on how to apply this product. See the **Product Information** section of this label for rotational crop restrictions.

## FARMSTEADS, RECREATIONAL, AND PUBLIC AREAS

When applied as listed GLUFOSINATE 280 Herbicide controls undesirable plant vegetation in non-crop areas around farmstead, building foundations, shelter belts along fences, airports, commercial plants storage and lumber yards, educational facilities, fence lines, ditch banks, dry ditches, schools parking lots, tank farms, pumping stations, and parks.

Refer to APPLICATION DIRECTIONS FOR USE ON TREE, VINE AND BERRY CROPS use section of the label for application instructions.

## RESTRICTIONS:

- Do not apply more than 246 fl. oz (4.5 lb ai/A) of this product per acre per year.
- Do not make more than 3 applications at a maximum rate of 82 fl. oz per acre (1.5 lb ai/A) per application.
- Retreatment Interval 14 days
- Do not allow grazing of treated vegetation.

#### 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 should not exceed 125° F. If storage temperature for bulk GLUFOSINATE 280 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 HANDLING:

[Rigid, Non-refillable containers small enough to shake (i.e. with capacities equal to or less than 5 gallons)]

Non-refillable 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 GLUFOSINATE 280 Herbicide. 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 inch 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 Gilmore Marketing & Development, Inc. for container return disposal and recycling directions.

SEED DISPOSAL: To dispose of out of date or otherwise unmarketable seed from plants which have been treated with GLUFOSINATE 280 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.

#### 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 must 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 Gilmore Marketing & Development, Inc. All such risks shall be assumed by the user or buyer.

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