



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

September 19, 2025

Prachi Pandya  
prachi.pandya@nufarm.com  
NUFARM, INC.

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment - Correction of typographical errors and other label revisions  
Product Name: Nufarm Credit 5.4 Herbicide  
Admin Number: 71368-126  
EPA Receipt Date: 01/14/2020  
Action Case Number: 00605372

Dear Prachi Pandya:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the 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 EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have questions, please contact Jamie Millard via email at [millard.jamie@epa.gov](mailto:millard.jamie@epa.gov).

Sincerely,

A handwritten signature in black ink that reads "Jamie Millard for". The script is elegant and cursive, with the word "for" written in a smaller, simpler font at the end.

Emily Schmid, Product Manager 25  
HB, RD  
Office of Pesticide Programs

# Nufarm Credit® 5.4

## Herbicide

[Alternate Brand Names]

[Credit® 5.4 Extra Non-Selective Herbicide] [Credit® 5.4 Herbicide]

For Non-Selective, Broad-Spectrum Weed Control in Many Agricultural Systems, including Glyphosate Tolerant use on Specified Glyphosate Tolerant Crop varieties

### 1.0 INGREDIENT

#### ACTIVE INGREDIENT:

Glyphosate, N-(phosphonomethyl) glycine, in the form of its isopropylamine salt\* ..... 53.8%

OTHER INGREDIENTS: ..... 46.2%

TOTAL ..... 100.0%

\*Contains 648 grams per liter or 5.4 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 480 grams per liter or 4 pounds per U.S. gallon of acid, glyphosate.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**SEE [BACK PANEL] [BELOW] FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS [AND DIRECTIONS FOR USE]**

Read the entire label before using this product. Use only according to label instructions.

### 2.0 IMPORTANT PHONE NUMBERS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300

For Medical Emergencies Only, Call (877) 325-1840

[Read "LIMIT OF WARRANTY AND LIABILITY" before buying or using. If terms are not acceptable, return at once unopened.]

[AVOID CONTACT WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, SINCE SEVERE INJURY OR DESTRUCTION MAY RESULT.]

[Herbicide for Glyphosate Tolerant Crops]

[Selective broad-spectrum weed control in Glyphosate Tolerant crops]

[Broad-spectrum weed control for many agricultural systems and farmsteads.]

A [Optional text: complete] broad-spectrum herbicide for industrial, turf, ornamental, forestry, roadside, utility rights-of-way, [Optional text, if applicable: select crop,] and other listed terrestrial weed control. (For a complete list of terrestrial uses, see the Directions for Use section in the attached label booklet.)

EPA REG. NO. 71368-126  
EPA EST. NO.

Manufactured For  
NUFARM, INC.  
11901 S. Austin Ave.  
Alsip, IL 60803



NET CONTENTS \_\_\_\_\_ GAL. ( \_\_\_\_\_ Liters)

[Designation as "NONREFILLABLE" or "REFILLABLE" for containers > 5 GAL]

071368-00126.20191210.MASTER

[Optional text: [Nufarm] Grow a Better Tomorrow.]

**ACCEPTED**

**9/19/2025**

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 71368-126

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### 3.0 PRECAUTIONARY STATEMENTS

#### 3.1 HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Causes moderate eye irritation. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash clothing before re-use.

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>HOT LINE NUMBER</b> Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.	

**DOMESTIC ANIMALS:** This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation could result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours

#### 3.2 Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- long-sleeved shirt and long pants,
- socks and shoes, and

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If there are no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

#### 3.3 USER SAFETY RECOMMENDATIONS

**Users should:**

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves (if worn) before removing. As soon as possible, wash thoroughly and change clothing.

#### 3.4 ENVIRONMENTAL HAZARDS

**Non-Target Organism Advisory:** This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters and rinsate.

#### 3.5 PHYSICAL OR CHEMICAL HAZARDS

Spray solutions of this product may be mixed, stored and applied using stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas, which can form a highly combustible gas mixture. This gas mixture

could flash or explode if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source and cause serious personal injury.

## **DIRECTIONS FOR USE**

It is a Violation Of Federal Law To Use This Product In Any Manner Inconsistent With Its Labeling. 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 regulations.

***[The following paragraph is reserved and will only appear on final printed labeling for products under this registration if and when required by EPA:]***

**ENDANGERED SPECIES PROTECTION REQUIREMENTS:** This product may have effects on federally listed threatened or endangered species or their critical habitat in some locations. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your county or parish has a Bulletin, and to obtain that Bulletin, consult <http://www.epa.gov/espp/>, or call 1-800-447-3813 no more than 6 months before using this product. Applicators must use Bulletins that are in effect in the month in which the pesticide will be applied. New Bulletins will generally be available from the above sources 6 months prior to their effective dates.]

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.

### **3.6 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 interval. 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 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls, waterproof gloves and shoes plus socks.

### **3.7 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.

Keep people and pets off treated areas until spray solution has dried.

### **3.8 Seed Potato Precautions**

Potatoes grown for seed are very sensitive to glyphosate at extremely low concentrations. Exposure of the seed potato crop can cause germination failure or deformities. Daughter tuber damage may occur at levels where mother crop symptoms are not viable. Multiple sprouting from eyes, weak and distorted stems, "little potato syndrome", cauliflower sprouts, root distortions, excessive root growth, suppressed tuber initiation and bulking failure or delay in opening of eyes and rotting of tubers in the field or store can result. Subsequent plantings of seed pieces from the exposed mother crop can result in delayed or no emergence or produce lower than normal yields. Glyphosate can contaminate seed potato crops through carryover residue in application equipment or drift from applying glyphosate to nearby crops. Always follow good wash-out procedures using detergents or other suitable cleaning agents to remove all residual traces of glyphosate from application equipment that may be used to apply other products to seed potato crops. To avoid contamination from spray drift follow the precautions in the "Spray Drift Management" section of the label.

### **4.0 PRODUCT INFORMATION**

**Product Description:** This product is a postemergence, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual and perennial weeds, woody brush, trees and vines. It is formulated as a water-soluble liquid containing surfactant and may be applied using standard and specialized pesticide application equipment after dilution and thorough mixing with water or other carrier according to label directions.

Do not add [*Optional label text:* surfactants, additives containing surfactants,] buffering agents or pH adjusting agents to the spray solution when this product is the only pesticide used. See the "MIXING" section of this label for instructions regarding other additives.

*Alternate label text:* No additional surfactant in the spray solution is needed. This includes additives containing surfactants, buffering agents or pH adjusting agents when this product is the only pesticide used.

**Mechanism of Action:** The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to the formation of specific amino acids.

**No Soil Activity:** This product binds tightly to soil particles and does not provide residual weed control. Weeds must be emerged at the time of application to be controlled by foliar application of this product. Weed seeds in the soil will not be affected by this product and will continue to germinate. Unattached plant rhizomes and root stocks beneath the soil surface will also not be affected by this product.

**Biological Degradation:** Degradation of this product is primarily a biological process carried out by soil microbes.

**Stage of Weeds:** Annual weeds are easiest to control when they are small. Optimal control of most perennial weeds is obtained when this product is applied at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS RATE SECTION," "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH, TREES AND VINES RATE SECTION" for more information on the control of specific weeds.

**Cultural Considerations:** Reduced weed control could result when this product is applied to annual or perennial weeds that have been mowed, grazed or cut, and have not been allowed to re-grow prior to application. Always use a higher product application rate within the given range when weed growth is heavy or dense, or when weeds are growing in an undisturbed (non-cultivated) area. Reduced weed control could also result when this product is applied to weeds that show signs of disease or insect damage, are covered with dust, or are surviving under poor growing conditions.

**Spray Coverage:** For optimal results, spray coverage must be uniform and complete. Do not spray foliage to the point of runoff.

**Rainfastness:** Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control. For maximum effectiveness, product should be applied 4 hours prior to irrigation or rain. Refer to specific use sections of this label for additional information on the minimum intervals required before re-application of this product.

**Time to Symptoms:** This product moves through the plant from the point of foliage contact to and into the root system. Visible effects are a gradual wilting and yellowing of the plant that advances to complete browning of aboveground growth and deterioration of underground plant parts. Effects are visible on most annual weeds within 2 to 4 days, but on most perennial weeds, effects might not be visible for 7 or more days after application. Extremely cool or cloudy weather following application could slow activity of this product and delay development of visual symptoms.

**Maximum Application Rates:** The maximum application or use rates stated throughout this label are given in units of volume (fluid ounces or quarts) of this product per acre. However, the maximum allowable application rates apply to this product combined with the use of any and all other herbicides containing the active ingredient Glyphosate, whether applied separately or in a tank mixture, on a basis of total pounds of Glyphosate (acid equivalents) per acre. If more than one Glyphosate-containing product is applied to the same site within the same year, you must ensure that the total use of Glyphosate (pounds acid equivalents) does not exceed the maximum allowed. See the "INGREDIENTS" section of this label for necessary product information.

Unless otherwise specified on this label, the combined total application of this product on a site must not exceed 6 quarts (6 pounds of Glyphosate acid) per acre per year. For applications on non-crop sites, or on tree, vine or shrub crop production sites, the combined total application of this product must not exceed 8 quarts (8 pounds of Glyphosate acid) per acre per year.

**NOTE:** Use of this product in any manner not consistent with this label could result in injury to persons, animals or crops, or have other unintended consequences.

## 5.0 WEED RESISTANCE MANAGEMENT

For resistance management, this product contains a Group 9 herbicide –Glyphosate. Any weed population may contain or develop plants naturally resistant to Nufarm Credit 5.4 Herbicide and other Group 9 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is



unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

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

- Rotate the use of this product or other Group 9 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 resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- [For further information or to report suspected resistance, contact [Nufarm contact] at [one of][any of] the following] [[[X]-XXX-XXX-XXXX] [,.][or]] 1-800-345-3330 [,.][or]] [Nufarm e-mail address] [,.][or]] [Nufarm website] [,.][or]][XXXX]].]

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 mechanisms of action. Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredient in this product.

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

- \* Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- \* A spreading patch of non-controlled plants of a particular weed species; and
- \* Surviving plants mixed with controlled individuals of the same species.

### 5.1 Integrated Pest Management

Nufarm recommends the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

### 5.2 Management of Glyphosate-Resistant Biotypes

Appropriate testing is needed to determine if a weed is resistant to Glyphosate. Contact your Nufarm representative to determine if resistance in any particular weed biotype has been confirmed in your area.

Glyphosate-resistant weeds can be controlled or managed by applying this product in combination with residual preemergence herbicides and/or other postemergence herbicides labeled for control of the targeted weed in the crop being grown. For more information, see the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label.

Since the occurrence of resistant weeds is difficult to detect prior to use, Nufarm accepts no liability for any losses that result from the failure of this product to control resistant weeds.

## 6.0 MIXING

Spray solutions of this product may be mixed, stored and applied using clean stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.

Eliminate any risk of siphoning the contents of the tank back into the carrier source while mixing. Use approved anti-back-siphoning devices where required by State or local regulations.

A 50-mesh nozzle screen or line strainer on the spray equipment is adequate.

Clean sprayer parts promptly after using this product by thoroughly flushing with water.

### **6.1 Mixing with Water**

PERFORMANCE OF THIS PRODUCT CAN BE SIGNIFICANTLY REDUCED IF WATER CONTAINING SOIL SEDIMENT IS USED AS CARRIER. DO NOT MIX THIS PRODUCT WITH WATER FROM PONDS OR DITCHES THAT IS VISIBLY MUDDY OR MURKY.

This product mixes readily with water. Mix spray solutions of this product as follows. Begin filling the mixing tank or spray tank with clean water. Add the required amount of this product near the end of the filling process and mix gently. Foaming of the spray solution can occur during mixing. To prevent or minimize foaming, mix gently, terminate bypass and return lines at the bottom of the tank, and, if necessary, add an appropriate anti-foam or defoaming agent to the spray solution.

### **6.2 Tank Mixtures**

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.

This product does not provide residual weed control. This product may be tank-mixed with other herbicides to provide residual weed control in the soil, a broader weed control spectrum, or an alternate mechanism of action.

Some tank-mix products have the potential to cause crop injury under certain conditions, at certain growth stages and/or under other circumstances. Read the label of all products to be used in the tank mixture prior to use to determine the potential for crop injury.

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers could result in reduced weed control or crop injury. Nufarm has not tested all tank-mix product formulations for compatibility, antagonism or reduction in product performance. To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified on this label, or on separate supplemental labeling or Fact Sheets published for this product.

When a tank-mix with a generic active ingredient, such as 2,4-D, atrazine, dicamba, diuron, pendimethalin, or any other product or material, is listed on this label, the user is responsible for ensuring that the specific application being made is included on the label of the product being used in the mix.

Refer to all individual product labels, supplemental labeling and Fact Sheets for all products in the tank mixture, and observe all precautions and limitations on the label, including application timing restrictions, soil restrictions, minimum re-cropping intervals and any crop rotation restrictions. Use according to the most restrictive precautionary statements for each product in the tank mixture. For optimal results, apply tank mixtures with this product at a minimum spray volume rate of 10 gallons per acre.

### **6.3 Tank-Mixing Procedure**

Always predetermine the compatibility of all tank-mix products together in the carrier by mixing small proportional quantities in advance.

Mix only the quantity of spray solution that will be applied that day. Application of tank-mix solutions that are allowed to stand overnight could result in reduced weed control.

Prepare tank mixtures of this product as follows:

- 1 Place a 20- to 35-mesh screen or wetting basket over the filling port of the tank.
- 2 Through the screen, fill the tank one-half full with water and start gentle agitation.
- 3 If ammonium sulfate is to be used, add it slowly through the screen into the tank and continue adding water into the tank through the screen. If dry ammonium sulfate is being used, ensure that it is completely dissolved in the tank before adding other products.
- 4 If a wettable powder is used, prepare a slurry of it with water and add it SLOWLY through the screen into the tank while continuing gentle agitation.
- 5 If a flowable formulation is used, premix one part flowable with one part water and add the diluted mixture SLOWLY through

the screen into the tank while continuing gentle agitation.

- 6 If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water and add the diluted mixture SLOWLY through the screen into the tank while continuing gentle agitation.
- 7 Continue filling the tank with water through the screen and add the required amount of this product near the end of the filling process.
- 8 [Optional label statement: If a nonionic surfactant is used, add it to the tank before completing the filling process.]
- 9 Add individual tank-mix components to the tank as follows: wettable powders, flowables, emulsifiable concentrates, drift reduction additives, water soluble liquids (this product) [Optional text: surfactant].

Maintain gentle agitation at all times until the contents of the tank are sprayed out. If the spray mixture is allowed to settle, agitate thoroughly to re-suspend the mixture before resuming application. Keep by-pass and return lines on or near the bottom of the tank to minimize foaming. A 50-mesh nozzle screen or line strainer on the spray equipment is adequate.

#### 6.4 Mixing Spray Solution Concentrations

Prepare the desired volume of spray solution at a given concentration by mixing the amount of this product indicated in the following table in water.

**Spray Solution Table:**

Amount Nufarm Credit 5.4 Herbicide					
Desired Volume	0.75%	1.0%	1.5%	5.0%	10.0%
1 Gallon	1.0 fluid ounce	1.3 fluid ounces	2 fluid ounces	6.5 fluid ounces	13 fluid ounces
25 Gallons	1.5 pint	1 quart	1.5 quarts	5 quarts	10 quarts
100 Gallons	3 quarts	1 gallons	1.5 gallons	5 gallons	10 gallons

2 tablespoons = 1 fluid ounce (fl oz)

For filling backpack and pump-up sprayers, consider mixing the appropriate amount of this product with water in a larger container and then filling the sprayer from the larger container.

#### 6.5 Surfactants [this section is optional in the final printed label]

Although not always required, surfactant may be added to spray solutions of this product. However, additional surfactant can increase the performance of this product at water carrier volumes above 30 gallons per acre or at application rates below 18 fluid ounces of this product per acre.

Nonionic surfactants that are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. Use a surfactant concentration of 0.25 to 0.5 percent (1 to 2 quarts per 100 gallons of spray solution) when adding surfactant that contains at least 70 percent active ingredient, or a 1-percent surfactant concentration (4 quarts per 100 gallons of spray solution) when adding surfactant that contains less than 70 percent active ingredient. Read and carefully observe all precautionary statements and other information on the surfactant label.

DO NOT add buffering agents or pH adjusting agents to the spray solution when this product is the only pesticide used.

DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR PREHARVEST APPLICATION TO COTTON OR ANY POSTEMERGENCE (IN-CROP) APPLICATION TO ROUNDUP READY AND SPECIFIED GLYPHOSATE TOLERANT COTTON AND GLYPHOSATE TOLERANT FLEX COTTON.

#### 6.6 Ammonium Sulfate

Unless otherwise directed, the addition of 1 to 2 percent dry ammonium sulfate by weight (8.5 to 17 pounds per 100 gallons of water), could increase the performance of this product on annual and perennial weeds, particularly under hard water conditions, drought conditions or when tank-mixed with certain residual herbicides. An equivalent amount of a liquid formulation of ammonium sulfate may also be used. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water promptly after use to reduce corrosion.

When using ammonium sulfate, apply this product at rates directed on this label; lower application rates will result in reduced performance.

#### 6.7 Colorants and Dyes

Colorants and marking dyes may be added to spray solutions of this product; however, they can reduce the performance of this

product. Use colorants and dyes according to the manufacturer's directions.

### 6.8 Drift Reduction Additives

Drift reduction additives may be used with all equipment types, except wiper applicators, sponge bars and controlled droplet applicators (CDA). When a drift reduction additive is used, read and follow all precautions, restrictions, limitations and all other information on the product label. Use of drift reduction additives can affect spray coverage, which could reduce the performance of this product.

## 7.0 APPLICATION EQUIPMENT AND TECHNIQUES

This product may be applied with the following application equipment:

**Aerial Application Equipment**-fixed-wing and helicopter

**Ground Application Equipment**-boom or boomless systems, pull-type sprayers, floaters, pick-up sprayers, spray coupes and other ground broadcast application equipment

**Handheld Sprayers**-backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other handheld and motorized spray equipment used to direct the spray onto weed foliage

\* This product is not registered in California or Arizona for use in mistblowers.

**Selective Application Equipment**-shielded and hooded sprayers, wiper applicator, sponge bar

**Injection Systems**-aerial or ground injection sprayers

**Controlled Droplet Applicator (CDA)**-handheld or boom-mounted applicators that produce a spray consisting of a narrow range of droplet sizes

APPLY THIS PRODUCT USING PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF ACCURATELY DELIVERING DESIRED VOLUMES.

RESTRICTION:

- Do not apply this product through any type of irrigation system.

### 7.1 Spray Drift Management

AVOID CONTACT OF THIS HERBICIDE WITH FOLIAGE, [Optional text: GREEN] STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, [Optional text, if applicable: EXCEPT AS DIRECTED FOR USE ON COULD RESULT. ® SPECIFIED GLYPHOSATE TOLERANT CROPS.] AS SEVERE PLANT INJURY OR DESTRUCTION

Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation, as small quantities of this product can cause severe damage or destruction to the crop, plants or other vegetation on which application was not intended.

AVOID DRIFT. USE EXTREME CARE TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHEN APPLYING THIS PRODUCT.

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

The likelihood of injury occurring as the result of spray drift while applying this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) that are likely to drift.

TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFERS MUST BE MAINTAINED.

AVOID APPLYING THIS PRODUCT AT EXCESSIVE SPEED OR SPRAYER PRESSURE.

### 7.2 Aerial Application Equipment

Unless otherwise prohibited, all applications of this product described on this label may be made using aerial application equipment where appropriate, provided that the applicator complies with the precautions and restrictions specified on this label or on separate supplemental labeling published for this product.

DO NOT APPLY THIS PRODUCT USING AERIAL APPLICATION EQUIPMENT EXCEPT UNDER CONDITIONS SPECIFIED ON THIS LABEL OR ON SEPARATELY PUBLISHED SUPPLEMENTAL LABELING FOR THIS PRODUCT.

FOR SPECIFIC USE INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS RELATED TO THE AERIAL APPLICATION OF THIS PRODUCT IN ARKANSAS AND CALIFORNIA, OR SPECIFIC COUNTIES THEREIN, REFER TO THE LIMITATIONS ON AERIAL APPLICATION IN THAT STATE OR COUNTY PRESENTED IN THIS SECTION.

Unless otherwise directed, the maximum single application rate of this product is 48 fluid ounces per acre when using aerial application equipment. Apply this product at the appropriate rate in 3 to 15 gallons of water per acre unless otherwise directed on this label or on separate supplemental labeling for this product. Refer to the individual use sections of this label for application rates, spray volumes and additional directions for use.

Drift control reduction additives may be used.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

#### **Aircraft Maintenance**

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES COULD RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE. The maintenance of an organic coating (paint) that meets aerospace specification MIL-C-38413 can help prevent corrosion.

### **AERIAL SPRAY DRIFT MANAGEMENT**

The following drift management requirements must be followed to minimize off-target drift movement during aerial application.

[Optional label text, if applicable: These requirements do not apply to forestry applications.]

- 1 The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- 2 Nozzles must always point backward, parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they must be followed.

### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### **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. Applying larger droplets reduces drift potential, but will not prevent drift if the application is made improperly, or under unfavorable environmental conditions, such as in windy, high temperature with low humidity, and/or inversion conditions as described below.

#### **Controlling Droplet Size**

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.

- **Pressure:** Operate at a sprayer pressure towards the lower end of the range listed for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing the pressure.

- **Number of nozzles:** Use the minimum number of nozzles that provide uniform coverage.

- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the air stream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

- **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. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

- **Boom length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length could further reduce drift without reducing swath width.

- **Application height:** Application must be made at a height of 10 feet or less above the top of the largest plants unless a greater height is required for aircraft safety. Making the application at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

#### **Swath Adjustment**

When an application is made with a crosswind present, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase the swath adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

#### **Wind**

Drift potential is lowest at wind speeds of between 2 and 10 miles per hour. However, many factors, including droplet size and equipment type, determine drift potential at any given wind speed. Avoid application when wind speeds are below 2 miles per hour due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

#### **Temperature and Humidity**

When making an application in low relative humidity, set application equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### **Temperature Inversion**

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

#### **Sensitive Areas**

Apply this product only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoid direct application to any body of water.

#### **State Specific Limitations on Aerial Application**

<b>LIMITATIONS ON AERIAL APPLICATION IN CALIFORNIA ONLY</b>
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DO NOT apply this product using aerial application equipment in residential areas.

AVOID DRIFT – DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT OF THIS PRODUCT ONTO ANY VEGETATION TO WHICH APPLICATION WAS NOT INTENDED CAN CAUSE DAMAGE. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, USE PROPER AERIAL APPLICATION EQUIPMENT FITTED WITH APPROPRIATE NOZZLES AND MAINTAIN ADEQUATE BUFFERS.

Follow the directions below when making an aerial application near non-target crops, desirable annual vegetation, or desirable perennial vegetation after bud break and before total leaf drop.

- 1 Do not apply this product within 100 feet of all desirable vegetation or non-target crops.
- 2 If winds are blowing up to 5 miles per hour TOWARD desirable vegetation or non-target crops, do not apply this product within 500 feet of the desirable vegetation or crops.
- 3 If winds are blowing between 5 and 10 miles per hour TOWARD desirable vegetation or non-target crops, a buffer zone greater than 500 feet might be needed to protect the desirable vegetation or crops.
- 4 Do not apply this product using aerial application equipment when winds are blowing in excess of 10 miles per hour.
- 5 Do not apply this product using aerial application equipment when inversion conditions exist.

When tank-mixing this product with 2,4-D, only 2,4-D amine formulations may be applied in California using aerial application

equipment. Tank mixtures of this product with 2,4-D amine formulations may be applied by air in California in fallow fields and in reduced tillage systems, and for alfalfa and pasture renovation applications only.

This product, when tank-mixed with dicamba, may not be applied by air in California.

#### **ADDITIONAL LIMITATIONS FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY**

Always read and follow the label directions and precautionary statements for all products used in the aerial application.

The following information applies only from February 15 through March 31 within the following boundaries of Fresno County, California:

North: Fresno County line

South: Fresno County line

East: State Highway 99

West: Fresno County line

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

#### **Written Directions**

Written directions MUST be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. These written directions MUST state the proximity of surrounding crops and that conditions of each manufacturer's product label and this label have been satisfied.

#### **Aerial Applicator Training and Equipment**

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

**Application at Night** – Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

To report known or suspected misuse of this product, call 1-800-332-3111.

#### **LIMITATIONS ON AERIAL APPLICATION IN ARKANSAS ONLY**

AVOID DRIFT. DO NOT APPLY INTO STILL AIR WHERE THERE IS A TEMPERATURE INVERSION LAYER LOW ENOUGH FOR FINE SPRAY PARTICLES TO BECOME SUSPENDED AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Apply this product at the appropriate rate in 3 to 15 gallons of water per acre.

Use sufficient carrier volume and appropriate equipment set-up to form droplets large enough to avoid drift potential. Coarse droplets in the 300 to 500 (VMD) micron range have a lower drift potential.

Applications are typically to be made with the nozzle release point at 8 to 15 feet above the top of the target plants unless a greater height is required for aircraft safety.

The distance of the outermost nozzles on the boom must not exceed 75 percent of the length of the wingspan or rotor. In many cases, reducing this distance to 65 percent of the length of the wingspan or rotor will improve drift control without affecting the swath width.

Nozzles must always discharge backward parallel with the air stream and never discharge downwards more than 45 degrees on fixed wing aircraft or forward of the prevailing airflow on rotary winged aircraft. Avoid the use of nozzles with wide-angle discharge.



Do not apply this product when winds are in excess of 10 miles per hour.

Do not apply when there is a low-level inversion where fine spray particles could be suspended in still air and move outside the target area when the inversion layer moves. These conditions can occur when wind speeds are less than 2 miles per hour.

Follow the directions below when an aerial application is made near non-target crops or other desirable vegetation:

- 1 Do not apply this product within 100 feet of non-target crops or any desirable vegetation.
- 2 If winds are blowing up to 5 miles per hour TOWARD non-target crops or desirable vegetation, do not apply this product within 500 feet upwind of the desirable vegetation or crop.
- 3 If winds are blowing between 5 and 10 miles per hour TOWARD non-target crops or desirable vegetation, a buffer zone greater than 500 feet might be needed to protect the crop or desirable vegetation.

### **7.3 Ground Application Equipment**

Apply this product at the appropriate rate as specified on this label in 3 to 40 gallons of water per acre when making a broadcast application using ground application equipment, unless otherwise directed on this label or on separate supplemental labeling or Fact Sheets published for this product. As the weed density increases, increase the spray volume towards the upper end of this range to ensure complete coverage. Use nozzles that will avoid generating a fine mist. For optimal results with ground application equipment, use flat-fan nozzles. Check spray pattern for uniform distribution of spray droplets.

### **7.4 Handheld Sprayers**

When using a handheld sprayer, apply spray solutions of this product uniformly and completely to the foliage of target weeds using a coarse droplet spectrum and a spray-to-wet technique; do not spray to the point of runoff. For the appropriate concentration of this product in the spray solution and timing of application to control specific weeds, woody brush, trees and vines, refer to the "ANNUAL WEEDS RATE SECTION," "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH, TREES AND VINES RATE SECTION" of this label.

Spot treatment application of this product for weed control in a cropping system using a handheld sprayer may be made only when specifically directed on this label or on separate supplemental labeling for this product. The crop sprayed with this product will be killed along with the weeds. Take care not to spray or allow spray to drift outside the target area in order to avoid unwanted crop destruction.

### **7.5 Selective Application Equipment**

Selective application equipment allows this product to be applied to weeds growing near the crop or other desirable vegetation without killing the desirable vegetation. Selective application equipment must be capable of preventing all contact of the herbicide solution with the crop or other desirable vegetation and operated without spray mist escape, leakage, or dripping of the herbicide solution.

AVOID CONTACT OF THIS HERBICIDE WITH DESIRABLE VEGETATION. Contact of this product with desirable vegetation could result in unwanted plant damage or destruction. To the extent consistent with applicable law, such damage shall be the sole responsibility of the applicator.

#### **Shielded and Hooded Sprayers**

A shielded sprayer directs the herbicide solution to the target weeds while protecting the crop or other desirable vegetation from being contacted by the herbicide spray with an impervious material or shield. Use nozzles that provide uniform coverage within the application area. Keep shields properly adjusted to protect desirable vegetation.

A hooded sprayer is a type of shielded sprayer where the spray pattern is fully enclosed, including the top, sides, front and back, thereby shielding the crop or other desirable vegetation from the spray solution.

This product may be diluted in water and applied using a shielded or hooded sprayer to weeds listed on this label growing on any non-crop site described on this label and in between rows of plants (row middles) in any cropping system listed on this label.

Properly adjust the hood to protect desirable vegetation. Ensure that the hood is capable of completely enclosing the spray pattern. If necessary when applying around crops grown on raised beds, extend the front and rear flaps of the hooded sprayer downward to reach the ground in deep furrows.

A hooded sprayer must be configured and operated in a manner that minimizes bouncing and avoids raising the hood up off the ground surface at any time. If the hood is raised, spray particles can escape and come into contact with the crop, causing damage to or destruction of the crop or other desirable vegetation. Avoid operating this equipment on rough or sloping terrain where the spray hood is likely to rise up off the ground surface.



Use hoods designed to minimize excessive dripping or runoff down the inside of the hood, such as a single, low pressure, low-drift, flat-fan nozzle with an 80- to 95-degree spray angle positioned at the top center of the hood, with a spray volume of 20 to 30 gallons per acre. The following procedures will help reduce the potential for crop injury when using a hooded sprayer:

- Operate the sprayer with the hood on the ground or skimming across the ground surface.
- Leave at least an 8-inch untreated strip over the drill row. (For example, if the crop row width is 38 inches, make the maximum width of the spray hood 30 inches.)
- Operate at a ground speed of no greater than 5 miles per hour to minimize bouncing of the hooded sprayer.
- Apply when wind speed is 10 miles per hour or less.
- Use low-drift nozzles that will provide uniform coverage within the application area.

Injury to a crop or other desirable vegetation can occur when application is made to foliage of weeds that come into direct contact with the crop or desirable vegetation. Do not apply this product when leaves of desirable vegetation are growing in direct contact with weeds. Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation can result in discoloration, stunting or destruction.

### **Wiper Applicator**

A wiper applicator is a device that physically wipes this product or solutions of this product directly onto the target weed or cut stump. Any handheld device that is capable of physically wiping this product or solutions of this product directly onto the target weed or cut stump, such as a paint brush, may be used.

A mechanical wiper applicator, such as a rope wick or sponge bar that can be driven through a field over the top of a crop or other desirable vegetation to control weeds that are taller than the desirable vegetation, must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation.

Wiper applicators may be used over the top of food or feed crops **ONLY** if specifically permitted for use over that crop by this label or by separately published supplemental labeling for this product.

When using a mechanical wiper applicator, adjust the height of the applicator to ensure adequate contact with weeds and so that the wiper contact point is a minimum of 2 inches above the desirable vegetation. Optimal results can be obtained when more of the weed is exposed to the herbicide solution and weeds are a minimum of 6 inches above the desirable vegetation. Weeds that do not come into contact with the herbicide solution will not be affected. Poor contact can occur when weeds are growing in dense clumps, when operating in an area of severe weed infestation or when weed height varies dramatically. In these situations, more than one application of this product might be necessary.

Operate wiper applicators at a ground speed of no greater than 5 miles per hour. Performance in areas of heavy weed infestation can be improved by reducing speed, which will provide more time for re-saturation of the wiper with the herbicide solution and more contact time of the wiper with the weed. Optimal results with a wiper applicator can be obtained when two applications are made travelling in opposite directions in the field.

Keep wiper surfaces clean.

Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation can result in discoloration, stunting or destruction. Avoid leakage or dripping onto desirable vegetation. Be aware that on sloping ground the herbicide solution can migrate to one side, causing dripping on the lower end and drying of the wiper on the upper end of the applicator.

Do not apply this product using a wiper applicator when weeds are wet.

Do not add surfactant to the herbicide solution when using a wiper applicator.

**For Rope and Sponge Wick Applicators-** use solutions ranging from 33 to 75 percent of this product in water.

**For Panel Applicators-** use solutions ranging from 33 to 100 percent (undiluted) of this product in water.

Mix only the amount of this product that will be used during a 1-day period, as reduced product performance can result from the use of solutions held in storage.

Clean wiper parts promptly after using this product by thoroughly flushing with water.

### **7.6 Injection Systems**

This product may be used in aerial and ground injection spray systems as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this concentrated product with the undiluted concentrate of other products for use in injection systems, unless otherwise directed.

### **7.7 Controlled Droplet Applicator (CDA)**

The amount of this product applied per acre using a controlled droplet applicator (CDA) must be no less than the rate specified on this label for application using conventional broadcast application equipment.

A controlled droplet applicator produces a spray pattern that is not easily visible. Use extreme care to avoid spray or drift from contacting the foliage or any other green tissue of desirable vegetation, as plant damage or destruction could result.

## **8.0 ANNUAL AND PERENNIAL CROPS**

THIS SECTION PROVIDES DIRECTIONS FOR USE OF THIS PRODUCT THAT APPLY TO ALL CROPS LISTED IN THE FOLLOWING SECTIONS. SEE THE INDIVIDUAL CROP SECTIONS FOR SPECIFIC USE INSTRUCTIONS, PREHARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See the "SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label or separately published supplemental labeling for this product for directions for use in Roundup Ready and specified glyphosate tolerant crops.

TYPES OF APPLICATION: Chemical Fallow; Preplant Fallow Beds; Preplant; At-Planting; Preemergence; Hooded Sprayer in Row Middles; Shielded Sprayer in Row Middles; Wiper Applicator in Row Middles; Post-Harvest

USE INSTRUCTIONS: This product may be applied during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or preemergence to annual and perennial crops listed on this label, except where specifically limited. For any crop not listed on this label, application must be made a minimum of 30 days prior to planting. Unless otherwise directed, apply this product according to the rates listed in the "ANNUAL WEEDS RATE SECTION," "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH, TREES AND VINES RATE SECTION" of this label. Application rates specified on this label for hard-to-control weeds, or those specified on separate supplemental labeling for this product, supersede the rates in the "ANNUAL WEEDS RATE SECTION," "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH, TREES AND VINES RATE SECTION" of this label. Additional information on hard-to-control weeds can be found on Fact Sheets published for this product.

Application of this product may be repeated as needed up to a maximum of 6 quarts per acre per year. Refer to specific use sections of this label for additional information on minimum intervals required before re-application of this product.

Hooded sprayers and wiper applicators capable of preventing all contact of the herbicide solution with the crop may be used in mulched or unmulched row middles after crop establishment. Wiper applicators may be used over the top of crops to control tall weeds only when specifically directed in the individual crop sections that follow. Refer to the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information regarding the potential for crop injury using selective application equipment. Crop injury is possible with these methods of application.

Spot treatment application of this product for weed control in a cropping system may be made only when specifically directed in the individual crop sections that follow.

Unless otherwise prohibited, all applications of this product described in the sections that follow may be made using aerial application equipment where appropriate, provided that the applicator complies with the precautions and restrictions specified on this label and on all supplemental labeling published for this product. Refer to the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on aerial application and procedures for avoiding spray drift that could cause injury to any vegetation not intended for application. Use of appropriate buffers will help prevent injury to adjacent vegetation.

TANK MIXTURES: This product may be tank-mixed with other herbicides to provide residual weed control, a broader weed control spectrum or an alternative mechanism of action. Always read and follow label directions for all products in the tank mixture. Use all products according to rates and timing specified on the label. Some tank-mix products have the potential to cause crop injury. Read the label for all products in the tank mixture prior to use to determine the potential for crop injury. Always predetermine the compatibility of tank-mix products together in the carrier by mixing small proportional quantities in advance. Mixing other products with this herbicide in the spray tank can cause incompatibility, antagonism, or a reduction in the efficacy of this product. Nufarm Company has not tested all product formulations for compatibility or performance in a tank-mix with this product. To the extent

consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not specifically identified on this label or on separate supplemental labeling or Fact Sheets for this product. See the "MIXING" section of this label for more information on tank mixtures.

**PRECAUTIONS:** Avoid contact of this herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops, as severe crop injury or destruction could result. Transplant seedlings coming into contact with weeds that are still wet with a spray solution of this product could result in significant crop injury. When making preemergence applications, application must be made before crop emergence to avoid severe crop injury. Broadcast application of this product at emergence will result in injury or death of emerged seedlings. Apply before seed germination in coarse sandy soils to further minimize the risk of crop injury. In crops where spot treatment is allowed, the crop sprayed with this product will be killed along with the weeds.

Take care not to spray or allow spray to drift

outside the target area in order to avoid unwanted crop destruction. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

Preharvest application on crops grown for seed could result in a reduction in germination or vigor. To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the preharvest use of this product on any crop grown for seed.

**RESTRICTIONS:**

- Observe the maximum application rates stated throughout this label.
- Maximum application rates apply to the use of this product combined with the use of any and all other herbicides containing Glyphosate as the active ingredient, whether applied separately or as mixtures.
- Calculate the application rates (Glyphosate acid equivalents) and ensure that the total use of this and specified glyphosate containing products does not exceed the stated maximum rate.
- See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.
- Unless otherwise directed on this label, application using selective equipment, including wiper applicators and hooded sprayers, must be made a minimum of 14 days prior to harvest. In crops where spot treatment is allowed, do not apply this product to more than 10 percent of the total field to be harvested, unless otherwise directed. Post-harvest and fallow applications must be made a minimum of 30 days prior to the planting of any crop not listed on this label.
- Pre-harvest interval (PHI): Do not harvest or feed vegetation from an area for 8 weeks following broadcast postemergence application, unless otherwise directed.
- When applying this product as a tank mixture with one or more products, refer to each individual tank-mix product label for restrictions and apply the mixture in accordance with the most restrictive statements for each product in the tank.
- Except otherwise specified, for non-crop uses, the combined total of all treatments must not exceed 6.0 quarts (6 lbs ae) of this product per acre per year.

### **8.1 Cereal and Grain Crops**

**LABELED CROPS:** Barley; Buckwheat; Millet (pearl, proso); Oats; Rice; Rye; Quinoa; Teff; Teosinte; Triticale; Wheat (all types); Wild Rice

**TYPES OF APPLICATION:** Those listed in Section 8.0, plus Red Rice Control Prior to Planting Rice; Spot Treatment (except rice); Control of Barnyardgrass in Rice Using Renovation Treatment (California only); Wiper Applicator (feed barley and wheat only); Preharvest (feed barley and wheat only)

#### **Preplant, At-Planting, Preemergence**

**USE INSTRUCTIONS:** This product may be applied before, during or after the planting of cereal crops, but prior to crop emergence.

#### **Red Rice Control Prior to Planting Rice**

**USE INSTRUCTIONS:** Flush fields prior to application to obtain uniform germination and stand of red rice and then apply 36 fluid ounces of this product in 5 to 10 gallons of water per acre when the majority of the red rice plants are at the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves might only be partially controlled. Avoid spraying during conditions of

low humidity, as reduced control of red rice could result.

**RESTRICTIONS:**

- Do not apply this product to rice fields or levees when fields contain floodwater.
- Do not flood fields for a minimum of 8 days following application.

**Spot Treatment (Except Rice)**

USE INSTRUCTIONS: This product may be applied as a spot treatment in cereal crops, except rice. Apply before heading in small grains.

**RESTRICTION:**

- Do not apply this product to more than 10 percent of the total field area to be harvested.

**Control of Barnyardgrass in Rice Using Renovation Treatment (California Only)**

**THIS APPLICATION FOR USE IN CALIFORNIA ONLY**

USE INSTRUCTIONS: This product may be applied as a renovation treatment in rice crops to control barnyardgrass (*Echinochloa crus-galli*) infestations using ground broadcast application equipment or a handheld sprayer. Renovation is defined as an herbicide application that will result in crop and weed destruction in an entire field or contiguous area treated within a field.

**RESTRICTIONS:**

- Rice straw and stubble from the application area, including a 25-foot buffer zone on all sides, may not be used for animal bedding, grazing, or any other feed purposes.
- DO NOT make this application using aerial application equipment.

**Wiper Applicator (Feed Barley and Wheat Only)**

USE INSTRUCTIONS: This product may be applied over the top of feed barley and wheat using a wiper applicator to control tall weeds. To control common rye or cereal rye, apply after weeds have headed and achieved maximum growth. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 35 days between application and harvest.
- Do not use roller applicator.

**Preharvest (Feed Barley and Wheat Only)**

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of feed barley or wheat. For feed barley, apply after the hard-dough stage when grain moisture is 20 percent or less. For wheat, apply after the hard-dough stage when grain moisture is 30 percent or less. Stubble may be grazed immediately after harvest.

Apply this product in 10 to 20 gallons of water per acre when using ground application equipment and in 3 to 10 gallons of water per acre when using aerial application equipment.

**RESTRICTIONS:**

- Do not apply more than 24 fluid ounces of this product per acre for preharvest application.
- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest or grazing.

**Post-Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after harvest of cereal crops. Higher rates might be needed to control large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for weed control following harvest of cereal crops. Read and follow label directions for all products in the tank mixture.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest or feeding of vegetation within the

application area.

- Plant back interval (PBI): Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

## 8.2 Corn

TYPES OF CORN: Field corn; Popcorn; Seed corn; Silage corn; Sweet corn

TYPES OF APPLICATION: Those listed in Section 8.0, plus Spot Treatment; Preharvest

For directions for use with field corn hybrids with Roundup Ready 2 Technology (including Glyphosate Tolerant Corn 2 and field corn products displaying the Glyphosate Tolerant 2 Technology logo), or with sweet corn hybrids with Glyphosate Tolerant 2 Technology (including Glyphosate Tolerant Sweet Corn and sweet corn products displaying the Roundup Ready 2 Technology logo), see the "GLYPHOSATE TOLERANT AND SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label. *[Alternative text: For directions for use with field corn hybrids with Roundup Ready 2 Technology (including Glyphosate Tolerant Corn 2 and field corn products displaying the Roundup Ready 2 Technology logo), or with Glyphosate Tolerant sweet corn, see the "GLYPHOSATE TOLERANT AND SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label.]*

### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied alone or in a tank-mix before, during or after planting corn, but prior to crop emergence.

TANK MIXTURES: This product may be tank-mixed with the following products. Ensure that the product used is labeled for application prior to the planting or the emergence of the type of corn crop being grown. Read and follow label directions for all products in the tank mixture. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

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[2,4-D; acetochlor; alachlor; atrazine; bicyclopyrone; carfentrazone-ethyl; clopyralid; dicamba; diflufenzopyr; dimethenamid; dimethenamid-p; flufenacet; flumetsulam; flumiclorac pentyl ester; isoxaflutole; linuron; metolachlor; s-metolachlor; metribuzin; pendimethalin; rimsulfuron; saflufenacil; simazine; thienencarbazone-methyl ]

For hard-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply 24 fluid ounces of this product per acre in these tank mixtures. For other annual weeds listed on this label, apply 18 to 24 fluid ounces of this product per acre when weeds are less than 6 inches tall and 24 to 36 fluid ounces per acre when weeds are over 6 inches tall. When using a nitrogen solution as the carrier, higher specified application rates might be needed for acceptable weed control.

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### RESTRICTION:

- Plant back interval (PBI): Application of 2,4-D or dicamba must be made a minimum of 7 days prior to planting corn.

In Southern states, do not mix this product in nitrogen solutions for application to hard-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. This area includes Illinois and Indiana south of Route 50, Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

### Hooded Sprayer

USE INSTRUCTIONS: This product may be applied using a hooded sprayer for weed control in between rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instructions on the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

### RESTRICTIONS:

- Corn must be at least 12 inches tall, measured without extending leaves.

- Do not apply more than 24 fluid ounces of this product per acre for each hooded sprayer application and no more than 72 fluid ounces per acre per year total.

#### **Spot Treatment**

USE INSTRUCTIONS: This product may be applied as a spot treatment prior to silking of corn.

RESTRICTION:

- Do not apply this product to more than 10 percent of the total field area to be harvested.

#### **Preharvest**

USE INSTRUCTIONS: Up to 72 fluid ounces of this product per acre may be applied using ground application equipment, or up to 48 fluid ounces per acre using aerial application equipment, when kernel-fill is complete and the corn is physiologically mature (black layer formed) and grain moisture is 35 percent or less.

RESTRICTION:

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest.

#### **Post-Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after harvest of corn. Higher rates might be needed to control large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for post-harvest application in corn. Read and follow label directions for all products in the tank mixture.

RESTRICTIONS:

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest or feeding of vegetation within the application area.
- Plant back interval (PBI): Application of this product must be made a minimum of 30 days prior to planting any crop not listed on this label.

### **8.3 Cotton**

TYPES OF APPLICATION: Those listed in Section 8.0, plus Selective Equipment; Spot Treatment; Preharvest

For directions for use with specified glyphosate tolerant cotton and Glyphosate Tolerant Flex cotton, see the "SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label.

#### **Preplant, At-Planting, Preemergence**

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton, but prior to crop emergence.

TANK MIXTURES: This product may be tank-mixed with 2,4-D or Clash and applied prior to planting only. This product may also be tank-mixed with the following products and applied prior to crop emergence. Ensure that the product used is labeled for application prior to planting or the emergence of cotton. Read and follow label directions for all products used in the tank mixture. Apply these tank mixtures in 10 to 20 gallons of water per acre.

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[acetochlor; clomazone; diuron; fluridone; flumioxazin; fluometuron; fomesafen; metolachlor; s-metolachlor; norflurazon; pendimethalin; prometryn; pyriithiobac-sodium; saflufenacil ]

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#### **Selective Equipment**

USE INSTRUCTIONS: This product may be applied using a hooded or shielded sprayer, or over the top of cotton using a wiper applicator to control tall weeds. See additional instructions on the use of this selective equipment in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**RESTRICTION:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest.

**Spot Treatment**

USE INSTRUCTIONS: This product may be applied in cotton as a spot treatment prior to boll opening.

**RESTRICTION:**

- Do not apply this product to more than 10 percent of the total field area to be harvested.

**Preharvest**

USE INSTRUCTIONS: This product provides weed control and cotton re-growth inhibition when applied prior to harvest. For weed control, apply at rates given in the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label. For cotton re-growth inhibition, apply 12 to 48 fluid ounces of this product per acre. Make preharvest application only after sufficient bolls have developed to produce the desired yield. Application made prior to this time could affect maximum yield potential.

TANK MIXTURES: This product may be tank-mixed with DEF 6, Dropp, Folex, Ginstar, or Prep to enhance cotton leaf-drop. Read and follow label directions for all products used in the tank mixture.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest.
- DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR PREHARVEST APPLICATION TO COTTON.

**8.4 Fallow Systems**

This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

TYPES OF APPLICATION: Chemical Fallow; Preplant Fallow Beds; Aid-to-Tillage

**Chemical Fallow**

USE INSTRUCTIONS: This product may be used as a substitute for tillage to control annual weeds in fallow fields. Broadcast or spot treatment application will also control or suppress many perennial weeds in fallow fields. Tank-mix this product with 2,4-D or dicamba for a broader weed control spectrum. Aerial application of up to 48 fluid ounces of this product per acre may be made onto fallow fields where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

**PRECAUTION:**

- Some crop injury could occur if dicamba is applied within 45 days of planting.

**Preplant Fallow Beds**

USE INSTRUCTIONS: This product will control weeds listed in the "ANNUAL WEEDS RATE SECTION," "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH, TREES AND VINES RATE SECTION" of this label prior to planting.

TANK MIXTURES: Apply 9 fluid ounces of this product, plus 2 to 3 fluid ounces of Goal 2XL, per acre to control the following weeds up to the maximum height or length indicated: 3 inches- common cheeseweed, chickweed, groundsel; 6 inches- London rocket, shepherd's-purse.

Apply 12 fluid ounces of this product, plus 2 to 3 fluid ounces of Goal 2XL, per acre to control the following weeds up to the maximum height or length indicated: 6 inches- common cheeseweed, groundsel, marestail (*Conyza canadensis*); 12 inches- chickweed, London rocket, shepherd's-purse.

**Aid-to-Tillage**

USE INSTRUCTIONS: This product may be used in conjunction with tillage practices in fallow systems, or prior to the planting of crops listed on this label (preplant), to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 9 fluid ounces



of this product in 3 to 10 gallons of water per acre before weeds are 6 inches in height. Application must be followed by conventional tillage no later than 15 days after application and before re-growth occurs. Allow a minimum of 1 day after application before tillage.

**PRECAUTION:**

- Tank mixtures with residual herbicides could result in reduced performance of this product.

## **8.5 Grain Sorghum (Milo)**

**TYPES OF APPLICATION:** Those listed in Section 8.0, plus Spot Treatment; Wiper Applicator; Preharvest

### **Preplant, At-Planting, Preemergence**

**USE INSTRUCTIONS:** This product may be applied alone or in a tank mixture before, during or after planting grain sorghum, but prior to crop emergence.

**TANK MIXTURES:** This product may be tank-mixed with the following products. Ensure that the product used is labeled for application prior to planting or emergence of grain sorghum. Read and follow label directions for all products used in the tank mixture. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

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[acetochlor; alachlor; atrazine; metolachlor; s-metolachlor; saflufenacil ]

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For hard-to-control annual weeds, such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply 24 fluid ounces of this product per acre in a tank mixture with one or more of the products listed here.

For control of other annual weeds listed on this label, apply 18 to 24 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 24 to 36 fluid ounces per acre when weeds are over 6 inches tall. When using a nitrogen solution as the carrier, the application rate might need to be increased to achieve acceptable weed control.

### **Spot Treatment, Wiper Applicator**

**USE INSTRUCTIONS:** This product may be applied as a spot treatment in grain sorghum before heading. This product may also be applied over the top of grain sorghum using a wiper applicator to control or suppress tall weeds. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**RESTRICTIONS:**

- For spot treatment, do not apply this product to more than 10 percent of the total field area to be harvested.
- Pre-harvest interval (PHI): When applied using a wiper applicator, allow a minimum of 40 days between application and harvest.
- Do not use a roller applicator.
- Do not feed or graze grain sorghum fodder or ensile vegetation within the application area.

### **Hooded Sprayer**

**USE INSTRUCTIONS:** This product may be applied using a hooded sprayer for weed control in between rows of grain sorghum. Make application before grain sorghum sends tillers between the drill rows. If tillers are sprayed with this herbicide, the main plant could be damaged or destroyed. Contact of this product in any manner with any vegetation to which application is not intended could cause damage. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instructions on the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**RESTRICTIONS:**

- Grain sorghum must be at least 12 inches tall, measured without extending leaves.
- Do not graze or feed grain sorghum forage or fodder following application of this product using a hooded sprayer.
- Do not apply more than 24 fluid ounces of this product per acre per hooded sprayer application and no more than 72 fluid ounces per acre per year total.

### **Preharvest**



USE INSTRUCTIONS: Up to 48 fluid ounces of this product per acre may be applied after sorghum grain has reached 30 percent moisture or less. As with other herbicides that cause sudden plant death, avoid preharvest application of this product on grain sorghum (milo) infected with charcoal rot as lodging can occur.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest of grain sorghum.
- Preharvest application of this product on grain sorghum (milo) is not registered for use in California.

**Post-Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after harvest of grain sorghum. Higher application rates might be needed to control large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for post-harvest application in grain sorghum (milo). Read and follow label directions for all products in the tank mixture.

This product may be applied to grain sorghum stubble following harvest to control or suppress re-growth. Apply 24 fluid ounces of this product per acre for control or 18 fluid ounces per acre for suppression.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest or feeding of vegetation within the application area.
- Plant back interval (PBI): Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

**8.6 Herbs and Spices**

LABELED CROPS: Allspice; Angelica; Star anise; Annatto (seed); Balm; Basil; Borage; Burnet; Camomile; Caper buds; Caraway; Black caraway; Cardamom; Cassia bark; Cassia buds; Catnip; Celery seed; Chervil (dried); Chive; Chinese chive; Cinnamon; Clary; Clove buds; Coriander leaf (cilantro or Chinese parsley); Coriander seed (cilantro); Costmary; Culantro (leaf); Culantro (seed); Cumin; Curry (leaf); Dill (dillweed); Dill (seed); Epazote; Fennel seed (common and Florence); Fenugreek; White ginger flower; Grains of paradise; Horehound; Hyssop; Juniper berry; Lavender; Lemongrass; Lovage (leaf and seed); Mace; Marigold; Marjoram (including oregano); Mexican oregano; Mioga flower; Mustard (seed); Nasturtium; Nutmeg; Parsley (dried); Pennyroyal; Pepper (black and white); Pepper leaves; Peppermint; Perilla; Poppy (seed); Rosemary; Rue; Saffron; Sage; Savory (summer and winter); Spearmint; Stevia leaves; Sweet bay; Tansy; Tarragon; Thyme; Vanilla; Wintergreen; Woodruff; Wormwood

TYPES OF APPLICATION: Those listed in Section 8.0, plus Spot Treatment (peppermint and spearmint only); Wiper Applicator (peppermint and spearmint only)

**PRECAUTION:**

- This product could cause crop injury when applied prior to transplanting or direct-seeding crops into plastic mulch. Remove residual product from the plastic prior to planting with a single 0.5-inch application of water, either by natural rainfall or by irrigation. Ensure that the wash water flushes off the plastic mulch and does not enter the transplant holes. Application made at crop emergence will result in injury or death of emerged seedlings.

**Spot Treatment, Wiper Applicator (Peppermint and Spearmint Only)**

USE INSTRUCTIONS: This product may be applied as a spot treatment in peppermint and spearmint, or over the top of peppermint and spearmint using a wiper applicator to control tall weeds. Application may be repeated on the same area at 30-day intervals. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest.
- For spot treatment application, do not apply this product to more than 10 percent of the total field area to be harvested.

## 8.7 Oilseed Crops

LABELED CROPS: Borage; Buffalo gourd; Calendula; Canola; Castor oil plant; Chinese tallowtree; Crambe; Cuphea; Echium; Euphorbia; Evening primrose; Flax; Gold of pleasure; Hare's ear mustard; Jojoba; Lesquerella; Meadowfoam; Milkweed; Mustard; Niger seed; Oil radish; Poppy seed; Rape; Rose hip; Safflower; Sesame; Stokes aster; Sunflower; Sweet rocket; Tallowwood; Tea oil plant; Vernonia

For directions for use with Glyphosate Tolerant canola see the "SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label.

TYPES OF APPLICATION: Those listed in Section 8.0, plus Preharvest (except buffalo gourd)

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product for use in safflower, sunflower and all other oilseed crops listed in this section, if a preharvest application is to be made. If a preharvest application is NOT to be made, the maximum application rate of this product for all preemergence, selective equipment and post-harvest applications in any oilseed crop listed in this section is limited only by the maximum of 6 quarts per acre per year. If a preharvest application is intended to be made to any crop listed in this section, except buffalo gourd, the maximum combined total of all preemergence and selective equipment applications is limited as indicated in the following table. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

Maximum Application Rates if a Preharvest Application is Made	
<b>Safflower</b>	
Combined total for all Preemergence and Selective Equipment applications	72 fluid ounces per acre
Preharvest application	72 fluid ounces per acre
<b>Sunflower</b>	
Combined total for all Preemergence and Selective Equipment applications	24 fluid ounces per acre
Preharvest application	24 fluid ounces per acre
<b>All Other Oilseed Crops Listed (Except Buffalo Gourd)</b>	
Combined total for all Preemergence and Selective Equipment applications	48 fluid ounces per acre
Preharvest application	36 fluid ounces per acre

### RESTRICTIONS:

- Do not exceed a total application rate of 6 quarts of this product per acre per year.
- Preharvest application is not permitted on buffalo gourd.

### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting oilseed crops listed in this section, but must be applied prior to crop emergence. Observe the maximum application rates listed at the beginning of this section.

TANK MIXTURES: For sunflower, a tank mixture with pendimethalin [*Alternative text:* Prowl herbicide] may be applied before, during or after planting into conventionally tilled soil, a cover crop, established sod or previous crop residue.

### RESTRICTIONS:

- See the use instructions at the beginning of this section for important information on maximum application rates for preemergence and selective equipment applications of this product.

### Selective Equipment

USE INSTRUCTIONS: This product may be applied using a wiper applicator or shielded sprayer between crop rows once the crop is established. Observe the maximum application rates listed at the beginning of this section. See additional instructions on the use of wiper applicators and hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

### Preharvest (Except Buffalo Gourd)

USE INSTRUCTIONS: This product provides weed control and serves as a harvest aid when applied to a physiologically mature oilseed crop listed in this section. For safflower, up to 72 fluid ounces of this product may be applied per acre when seed has lost its opaque character, approximately 20 to 30 days after the end of flowering of the secondary branches. For sunflower, up to 24 fluid ounces of this product per acre may be applied when the backsides of sunflower heads are yellow and bracts are turning brown, and seed moisture content is less than 35 percent. For all other oilseed crops listed in this section (except buffalo gourd), up to 36 fluid

ounces of this product per acre may be applied prior to harvest.

**RESTRICTIONS:**

- DO NOT MAKE A PREHARVEST APPLICATION if you have exceeded the maximum application rates for the combined total of all preemergence and selective equipment applications listed in the table at the beginning of this section.
- Make only 1 preharvest application of this product.
- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest or feeding to livestock.
- Plant back interval (PBI): Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.
- Preharvest application is not allowed on buffalo gourd or on Glyphosate Tolerant canola.

**Post-Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after harvest of oilseed crops. Higher application rates might be needed for control of large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for post-harvest application in the crop harvested. Read and follow label directions for all products in the tank mixture.

**RESTRICTIONS:**

- Do not exceed a total application rate of 6 quarts of this product per acre per year.
- Pre-harvest interval (PHI): Allow a minimum of 7 days between application of this product and harvest or feeding of vegetation within the application area.
- Plant back interval (PBI): Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

## **8.8 Soybean**

TYPES OF APPLICATION: Those listed in Section 8.0, plus Spot Treatment; Selective Equipment; Preharvest

For directions for use with specified glyphosate tolerant soybean and glyphosate tolerant 2 Yield soybean, see the "ROUNDUP READY AND SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label.

**Preplant, At-Planting, Preemergence**

USE INSTRUCTIONS: This product may be applied alone or in a tank mixture before, during or after planting soybean, but prior to crop emergence.

TANK MIXTURES: This product may be tank-mixed with 2,4-D, and applied prior to planting only. This product may also be tank-mixed with the following products and applied prior to crop emergence. Ensure that the product used is labeled for application prior to planting or the emergence of soybean. Read and follow label directions for all products in the tank mixture. Apply these tank mixtures in 10 to 20 gallons of water per acre.

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[acetochlor; alachlor; atrazine; carfentrazone-ethyl; chlorimuron ethyl; clethodim; clomazone; cloransulam-methyl; dimethenamid; dimethenamid-p; fluzifop-p-butyl; flufenacet; flumiclorac pentyl ester; flumioxazin; fluthiacet-methyl; fomesafen; imazaquin; imazethapyr; lactofen; linuron; metolachlor; s-metolachlor; metribuzin; pendimethalin; pyroxasulfone; quizalofop P-ethyl; saflufenacil; sulfentrazone; tribenuron methyl; trifluralin ]

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For hard-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2

inches tall, and Pennsylvania smartweed up to 6 inches tall, apply 24 fluid ounces of this product per acre in a tank mixture with one of the products listed. For other annual weeds listed on this label, apply 18 to 24 fluid ounces of this product per acre when weeds are less than 6 inches tall and 24 to 36 fluid ounces when weeds are over 6 inches tall.

#### **Spot Treatment**

USE INSTRUCTIONS: This product may be applied as a spot treatment prior to initial pod set in soybean.

RESTRICTION:

- Do not apply this product to more than 10 percent of the total field area to be harvested.

#### **Selective Equipment**

USE INSTRUCTIONS: This product may be applied in soybean using a shielded sprayer, hooded sprayer, wiper applicator or sponge bar. See additional instructions on the use of selective equipment in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTION:

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest.

#### **Preharvest**

USE INSTRUCTIONS: This product may be applied to soybean prior to harvest after pods have set and lost all green color. Apply at rates given in the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label. Take care to avoid excessive seed shatter loss due to ground application equipment.

RESTRICTIONS:

- Do not apply more than 3.8 quarts of this product per acre for preharvest application using ground application equipment or more than 48 fluid ounces per acre using aerial application equipment.
- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest of soybean.
- If the preharvest application rate is greater than 24 fluid ounces per acre, do not graze or harvest hay or fodder within the application area for livestock feed within 25 days of application.
- If the application rate is 24 fluid ounces per acre or less, the grazing restriction is reduced to 14 days after application.

### **8.9 Sugarcane**

TYPES OF APPLICATION: Those listed in Section 8.0, plus Spot Treatment

#### **Preplant, At-Planting, Preemergence**

USE INSTRUCTIONS: This product may be applied in or around sugarcane fields, or in fields prior to the emergence of plant cane.

RESTRICTION:

- Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

#### **Spot Treatment**

USE INSTRUCTIONS: This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, apply a 1-percent solution of this product in water using a handheld sprayer and a spray-to-wet technique. Optimal results can be obtained on volunteer or diseased sugarcane when application is made when there are at least 7 new leaves. Avoid contact of this herbicide with healthy sugarcane plants as severe damage or destruction could result.

RESTRICTION:

- Do not feed or graze sugarcane foliage within the application area.

#### **Hooded Sprayer**

USE INSTRUCTIONS: This product may be applied using a hooded sprayer for weed control in between rows of sugarcane. See additional instructions on the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTION:

- Do not allow weeds within the application area to come into contact with the crop.

#### **Fallow Treatment**

USE INSTRUCTIONS: This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane by applying 2.8 to 3.8 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves. Allow a minimum of 7 days after application before tillage. Aerial application of up to 72 fluid ounces per acre may be made onto fallow sites where there is sufficient buffer to prevent drift onto adjacent crops. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for this application in sugarcane. Read and follow label directions for all products in the tank mixture.

#### **Sugarcane Ripening**

USE INSTRUCTIONS: This product may be used as a foliar-applied plant growth regulator to hasten ripening and extend the period of high sucrose level in both low- and high-tonnage sugarcane. Most of the sucrose increase is concentrated in the top nodes of the cane stalk. To maximize sugar recovery where topping is practiced at harvest, top at the base of the fourth leaf. Consult your state sugarcane authority or local Nufarm representative regarding the degree of sucrose response that can be anticipated prior to application of this product.

As a result of leaf desiccation, improved trash burn can be expected.

Apply this product at the following rates and timing according to the State in which the sugarcane is grown. Use the higher application rate within the given range when applying to sugarcane under adverse ripening conditions or to less responsive varieties.

**FLORIDA** – Apply 5.6 to 13.5 fluid ounces of this product per acre 3 to 5 weeks before harvest of LAST RATOON CANE ONLY.

**HAWAII** – Apply 10 to 23.6 fluid ounces of this product per acre 4 to 10 weeks before harvest.

**LOUISIANA** – Apply 4.5 to 13.5 fluid ounces of this product per acre 3 to 7 weeks before harvest of RATOON CANE ONLY.

**PUERTO RICO** – Apply 5.6 fluid ounces of this product per acre 3 to 5 weeks before harvest of RATOON CANE ONLY.

**TEXAS** – Apply 5.6 to 13.5 fluid ounces of this product per acre 3 to 5 weeks before harvest of RATOON CANE ONLY.

#### **PRECAUTIONS:**

- Application of this product could initiate development of shooting eyes. This product might not increase the sucrose content of sugarcane under conditions of good natural ripening. Within 2 to 3 weeks after application, this product could produce a slight yellowing to a pronounced browning and drying of leaves, and a shortening of upper internodes. Spindle death could occur.
- Rainfall within 6 hours after application could reduce the effectiveness of this product.
- Application to sugarcane grown for seed could result in a reduction in germination or vigor. To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the preharvest use of this product on sugarcane grown for seed.

#### **RESTRICTIONS:**

- Do not feed or graze sugarcane forage following application.
- Do not plant subsequent crops within 30 days after application of this product other than the following: alfalfa or other forage legumes, beans (all types), corn (all types), cotton, melons (all types), pasture grasses, peanuts, potatoes (Irish or sweet), sorghum (milo), soybeans, squash (all types) or wheat.
- Do not apply for enhanced ripening to any crops other than sugarcane. Use of this product in any manner not consistent with this label could result in injury to persons, animals or crops, or have other unintended consequences.

#### **8.10 Vegetable Crops**

THIS SECTION PROVIDES DIRECTIONS FOR USE THAT APPLY TO ALL VEGETABLE CROPS LISTED IN THE FOLLOWING SECTIONS. SEE THE INDIVIDUAL CROP SECTIONS FOR SPECIFIC DIRECTIONS FOR USE, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATION: Chemical Fallow; Preplant Fallow Beds; Preplant; At-Planting; Preemergence; Prior to Transplanting

Vegetables; Hooded Sprayer in Row Middles; Shielded Sprayer in Row Middles; Wiper Applicator in Row Middles; Directed Application (non-bearing ginseng only); Wiper Applicator (carrot, rutabaga, sweet potato only); Post-Harvest

**PRECAUTIONS:**

- This product could cause crop injury when applied prior to transplanting or direct-seeding crops into plastic mulch. Remove residual product from the plastic with a single 0.5-inch application of water, either by natural rainfall or irrigation, prior to planting. Ensure that the wash water flushes off the plastic mulch and does not enter the transplant holes. Application of this product at crop emergence will result in injury or death to emerged seedlings.
- Avoid contact of this herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from the plastic mulch), or fruit of crops, as severe crop injury or destruction could result. Transplanted seedlings coming into contact with freshly sprayed weeds could result in significant crop injury.
- Preemergence application must be made before the crop emerges from the soil to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of crop injury. In crops with vines, make hooded sprayer, shielded sprayer and wiper applications in row middles prior to vine development, otherwise severe crop injury or destruction could result.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Unless otherwise specified, application using selective equipment, including wiper applicators and hooded sprayers, must be made a minimum of 14 days prior to harvest.
- Post-harvest and fallow applications must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**Brassica Vegetables**

LABELED CROPS: Broccoli; Chinese broccoli (gai lon); Broccoli raab (rapini); Brussels sprouts; Cabbage; Chinese cabbage (bok choy); Chinese cabbage (napa); Chinese mustard cabbage (gai choy); Cauliflower; Cavalo broccoli; Collards; Kale; Kohlrabi; Mizuna; Mustard greens; Mustard spinach; Rape greens

**Bulb Vegetables**

LABELED CROPS: All cultivars, varieties and/or hybrids of Chive (including Chinese); Daylily; Elegans hosta; Fritillaria; Garlic (including great-headed, serpent); Kurrat; Leek (including lady's, wild); Onion (including Beltsville bunching, bulb, Chinese, fresh, green, macrostem, pearl, potato, tree, Welsh); Shallot

**Cucurbit Vegetables and Fruits**

LABELED CROPS: Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Edible gourd (includes hyotan, cucuzza, hechima, Chinese okra); Melons (all); *Momordica* spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); Muskmelon (includes cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey ball melon, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon); Pumpkin; Summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Winter squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); Watermelon

**RESTRICTION:**

- For cantaloupe, casaba melon, crenshaw melon, cucumber, gherkin, gourds, honeydew melon, honey ball melon, mango melon, melons (all), muskmelon, Persian melon, pumpkin, squash (summer, winter), and watermelon, allow a minimum of 3 days between application and planting.

**Leafy Vegetables**

LABELED CROPS: Amaranth (Chinese spinach); Arugula (roquette); Beet greens; Cardoon; Celery; Chinese celery; Celtuce; Chaya; Chervil; Edible-leaved chrysanthemum; Garland chrysanthemum; Corn salad; Cress (garden, upland); Dandelion; Dock (sorrel); Dokudami; Endive (escarole); Florence fennel; Gow kee; Lettuce (head, leaf); Orach; Parsley; Purslane (garden, winter); Radicchio (red chicory); Rhubarb; Spinach; New Zealand spinach; Vine spinach; Swiss chard; Watercress (upland); Water spinach

**RESTRICTIONS:**

- For watercress, allow a minimum of 3 days between application and seeding.
- Do not apply this product during the period between seeding and emergence.

### **Fruiting Vegetables**

LABELED CROPS: All cultivars, varieties and/or hybrids of Eggplant (including African, pea, scarlet); Cocona; Garden huckleberry; Goji berry; Groundcherry (*Physalis* spp.); Martynia; Naranjilla; Okra; Pepino; Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper); Roselle; Sunberry; Tomatillo; Tomato

### **RESTRICTIONS:**

- Plant back interval (PBI): Allow a minimum of 3 days between application and planting.

### **PRECAUTION:**

- For tomato and tomatillo, do not apply this product using a hooded or shielded sprayer in row middles because of the potential for crop injury.

### **Legume Vegetables (Succulent or Dried)**

LABELED CROPS: Bean (*Lupinus*: includes grain lupin, sweet lupin, white lupin, white sweet lupin); Bean (*Phaseolus*: includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); Bean (*Vigna*: includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); Broad bean (fava); Chickpea (garbanzo); Guar; Jackbean; Lablab bean; Lentil; Pea (*Pisum*: includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea); Pigeon pea; Soybean (immature seed); Sword bean

TYPES OF APPLICATION: Those listed in Section 8.0, plus Spot Treatment (dry beans, peas, lentils chickpeas only); Preharvest (dry beans, peas, lentils chickpeas only)

### **Spot Treatment (Dry Beans, Peas, Lentils and Chickpeas Only)**

USE INSTRUCTIONS: This product may be applied as a spot treatment to control troublesome weeds such as Canada thistle, quackgrass, mayweed (dog fennel) and milkweed in dry beans, peas, lentils and chickpeas. Apply up to 24 fluid ounces of this product per acre in dry beans, or up to 72 fluid ounces per acre in dry peas, lentils and chickpeas, in 10 to 20 gallons of water using ground application equipment, or use a 2-percent solution in a handheld sprayer. For optimal results, apply at or beyond the bud stage of growth.

### **RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest.
- Only one spot treatment application may be made per year.
- Do not combine spot treatment with a preharvest broadcast application on the same crop area.
- Plant back interval (PBI): Allow a minimum of 30 days between application and the planting of any crop not listed on this label.
- Do not feed vines and hay from the application area to livestock.
- Do not apply this product in cowpeas or field (feed) peas, since this crop is considered to be grown only as livestock feed.

### **Preharvest (Dry Beans, Peas, Lentils and Chickpeas Only)**

USE INSTRUCTIONS: This product may be applied over the top of dry beans, peas, lentils and chickpeas prior to harvest. Apply up to 24 fluid ounces of this product per acre in dry beans, or up to 72 fluid ounces per acre in dry peas, lentils and chickpeas, in 3 to 20 gallons of water per acre at the hard dough stage of the legume seed (30 percent grain moisture or less).

### **RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest.
- Only one preharvest application may be made per year.
- Do not combine a preharvest application with a spot treatment application on the same crop area.

- Plant back interval (PBI): Allow a minimum of 30 days between application and the planting of any crop not listed on this label.
- Do not feed vines and hay from the application area to livestock.
- Do not make a preharvest application of this product in cowpeas or field (feed) peas, since this crop is considered to be grown only as livestock feed.

#### **Root and Tuber Vegetables**

LABELED CROPS: Arracacha; Arrowroot; Chinese artichoke; Jerusalem artichoke; Beet (garden); Burdock; Canna; Carrot; Cassava (bitter and sweet); Celeriac; Chayote (root); Chervil (turnip-rooted); Chicory; Chufa; Dasheen (taro); Galangal; Ginger; Ginseng; Horseradish; Leren; Kava (turnip rooted); Parsley (turnip rooted); Parsnip; Potato; Radish; Oriental radish; Rutabaga; Salsify; Black salsify; Spanish salsify; Skirret; Sweet potato; Tanier; Turmeric; Turnip; Wasabi; Yacon; Yam bean; True yam

TYPES OF APPLICATION: Those listed in Section 8.0, plus Directed Application (non-bearing ginseng only); Wiper applicator (carrot, rutabaga, sweet potato only)

#### **Directed Application in Ginseng (Non-Bearing Only)**

USE INSTRUCTIONS: This product may be applied for weed control in established non-bearing ginseng using a boom sprayer, CDA, shielded sprayer, wiper applicator, handheld or backpack wand, lance, or orchard gun. See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

#### **PRECAUTION:**

- Control the application so as to not allow any contact of this product with the ginseng plant. Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation could result in discoloration, stunting or destruction.

#### **RESTRICTION:**

- Pre-harvest interval (PHI): Application must be made a minimum of one year prior to ginseng harvest.

#### **Wiper Applicator (Carrot, Rutabaga and Sweet Potato Only)**

USE INSTRUCTIONS: A 33-percent solution of this product by volume in water may be applied using a wiper applicator over the top of carrot, rutabaga and sweet potato for the control of tall weeds. See additional use instructions for wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

#### **RESTRICTIONS:**

- Pre-harvest interval (PHI): For carrot, a maximum of two wiper or sponge bar applications may be made a minimum of 60 days prior to harvest following the first application and 7 days prior to harvest following the second application or if only one wiper application is made over the top of the carrot crop.
- Pre-harvest interval (PHI): For rutabaga, allow a minimum of 14 days between application and harvest.
- Pre-harvest interval (PHI): For sweet potato, a maximum of five wiper or sponge bar applications may be made with a minimum of 14 days between applications and a minimum of 7 days prior to harvest.

#### **8.11 Miscellaneous Crops**

LABELED CROPS: Aloe vera; Asparagus; Bamboo shoots; Globe artichoke; Okra; Peanut; Pineapple; Sugarbeet

TYPES OF APPLICATION: Those listed in Section 8.0, plus Spot Treatment (asparagus)

For directions for use with Glyphosate Tolerant sugarbeet, see the "SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label.

#### **PRECAUTIONS:**

- Preemergence application must be made before the crop emerges from the soil to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of crop injury.



- In crops with vines, apply this product in row middles using a hooded sprayer, shielded sprayer or wiper applicator prior to vine development, otherwise severe crop injury or destruction could result.

#### **Spot Weed Control, Site Preparation**

USE INSTRUCTIONS: This product may be applied for spot weed control and site preparation prior to planting or transplanting crops listed in this section.

#### **PRECAUTION:**

- This product could cause crop injury when applied prior to transplanting or direct-seeding crops into plastic mulch. Remove residues of this product from the plastic with a single 0.5-inch application of water, either by natural rainfall or irrigation, prior to planting. Ensure that the wash water flushes off the plastic mulch and does not enter transplant holes.

#### **RESTRICTIONS:**

- Plant back interval (PBI): Allow a minimum of 21 days between residue removal and transplanting.
- Do not apply this product within 7 days prior to emergence of the first asparagus spears.
- Do not feed or graze pineapple forage from within the application area.

#### **Spot Treatment (Asparagus)**

USE INSTRUCTIONS: This product may be applied immediately after cutting asparagus, but prior to the emergence of new spears.

#### **RESTRICTIONS:**

- Do not apply this product to more than 10 percent of the total field area to be harvested.
- Pre-harvest interval (PHI): Do not harvest asparagus within 5 days of a spot treatment application.

#### **Post-Harvest in Asparagus**

USE INSTRUCTIONS: This product may be applied for weed control after the last harvest of asparagus and all spears have been removed. If spears are allowed to re-grow, delay application until ferns have developed and make the application as a directed or shielded spray in order to avoid contact of this product with ferns, stems or spears. See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

#### **PRECAUTION:**

- Direct contact of this product with asparagus could result in serious crop injury.

## **9.0 TREE, VINE AND SHRUB CROPS**

THIS SECTION PROVIDES DIRECTIONS FOR USE THAT APPLY TO ALL TREE, VINE, AND SHRUB CROPS LISTED IN THE FOLLOWING SECTIONS. SEE THE INDIVIDUAL CROP SECTIONS FOR SPECIFIC DIRECTIONS FOR USE, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATION: Preplant (site preparation); Broadcast Spray; Selective Equipment (shielded sprayer, wiper applicator), Directed Spray and Spot Treatment in Middles (between rows of trees, vines or bushes) and Strips (within rows of trees, vines or bushes); Site Weed Control; Perennial Grass Suppression; Cut Stump Application

USE INSTRUCTIONS: Unless specifically prohibited in the individual crop sections that follow, this product may be applied using a boom sprayer, controlled droplet applicator (CDA), shielded sprayer, wiper applicator, handheld or backpack sprayer, lance or orchard gun, in middles (between rows of trees, vines or bushes), strips (within rows of trees, vines or bushes), and for weed control or perennial grass suppression in established tree fruit and nut groves, orchards and vineyards. It may also be used for site preparation prior to planting or transplanting these crops.

Apply 12 fluid ounces to 3.8 quarts of this product per acre as directed in the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label. Use the higher application rate within a given range when weeds are stressed, growing in dense populations or greater than 12 inches tall. Application may be repeated as needed up to a maximum of 8 quarts of this product per acre per year. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

#### **PRECAUTIONS:**

- Use extreme care to avoid contact of this herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of desirable trees, canes and vines.
- Avoid application when recent pruning wounds or other mechanical injury have occurred.
- Contact of this product with other than matured brown bark could result in serious crop damage or destruction.
- Only shielded or directed sprayers may be used in crops where the potential for crop contact is high, and then only where there is sufficient clearance.
- For application in strips (within rows of trees), only selective equipment (directed sprayer, hooded sprayer, shielded sprayer or wiper applicator) may be used in order to minimize the potential for overspray or drift of this product onto the crop.
- For berry crops, hooded sprayers must be fully enclosed including top, sides, front and back. Only wiper applicators or shielded sprayers capable of preventing all contact of this product with the crop may be used.
- See additional use instructions and precautions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**RESTRICTION:**

- Plant back interval (PBI): Allow a minimum of 3 days between application of this product and transplanting.

**Middles (between rows)**

USE INSTRUCTIONS: This product will control or suppress annual and perennial weeds and ground covers growing between rows of tree, vine and shrub crops listed on this label. If weeds are under drought stress, irrigate prior to application. Reduced weed control could result if weeds have been recently mowed at the time of application.

TANK MIXTURES: A tank mixture of this product with Goal 2XL may be applied for annual weed control between rows (middles) of a variety of tree and vine crops when weeds are stressed or growing in dense populations. Application of 12 to 24 fluid ounces of this product plus 3 to 12 fluid ounces of Goal 2XL per acre will control annual weeds with a maximum height or length of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's-purse, annual sowthistle, filaree (suppression), horseweed/marestail, stinging nettle and common purslane (suppression). This tank-mix will also control common cheeseweed (malva) or hairy fleabane with a maximum height or length of 3 inches.

This product may also be applied to row middles in tank mixtures with the following products.

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[2,4-D; bromacil; clethodim; diuron; fluazifop-P-butyl; flumioxazin; glufosinate-ammonium; indaziflam; napropamide; norflurazon; oryzalin; oxyfluorfen; pendimethalin; penoxsulam; pyraflufen ethyl; rimsulfuron; saflufenacil; sethoxydim; simazine; thiazopyr ]

Ensure that the product used is labeled for application within the crop being grown. Read and follow label directions for all products in the tank mixture.

**Strips (within rows)**

TANK MIXTURES: This product may be applied within rows of tree, vine and shrub crops in tank mixtures with the following products.

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[2,4-D; bromacil; clethodim; diuron; fluazifop-P-butyl; flumioxazin; glufosinate-ammonium; indaziflam; napropamide; norflurazon; oryzalin; oxyfluorfen; pendimethalin; penoxsulam; pyraflufen ethyl; rimsulfuron; saflufenacil; sethoxydim; simazine; thiazopyr ]

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[Alion; Cheetah; Devrinol 50-DF; Direx 4L; Dri-Clean; Fusilade DX; Goal 2XL; GoalTender; Karmex DF; Karmex II DF; Matrix FNV; Orchard Master CA; Pindar GT; Poast; Prowl; Prowl H2O; Princep Caliber 90; Rely 200; Select Max; Simazine 4L; Simazine 80W; Sim-Trol 4L; Solicam DF; Surflan AS; Surflan 75W; Treevix Powered by Kixor; Tuscany; Venue; Visor 2E; Weedar 64]

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Ensure that the product used is labeled for application within the crop being grown. Read and follow label directions for all products in the tank mixture.

#### RESTRICTION:

- Do not apply these tank mixtures in Puerto Rico.

#### Perennial Grass Suppression

This product will suppress perennial grasses such as bahiagrass, bermudagrass, tall fescue, orchardgrass, Kentucky bluegrass and quackgrass that are grown as ground covers in tree, vine and shrub crops.

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 4.5 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4.5 fluid ounces of this product per acre. Do not add ammonium sulfate to the spray mix.

For optimal results, mow cool-season grass covers in the spring to even their height and then apply this product 3 to 4 days after mowing.

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4.5 fluid ounces of this product in 10 to 25 gallons of water per acre 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches prior to seedhead emergence. For suppression for up to 120 days, apply 3.5 fluid ounces of this product per acre followed by an application of 2.5 to 3.5 fluid ounces per acre about 45 days later. Make no more than two applications per year.

For burndown of bermudagrass, apply 24 to 48 fluid ounces of this product in 3 to 20 gallons of water per acre. Make this application only if a reduction of the bermudagrass stand can be tolerated. When burndown is required prior to harvest, make the application a minimum of 21 days prior to harvest to allow sufficient time for burndown to occur.

For suppression of bermudagrass, apply 4.5 to 12 fluid ounces of this product per acre east of the Rocky Mountains and 12 fluid ounces west of the Rocky Mountains in a total spray volume of 3 to 20 gallons per acre no sooner than 1 to 2 weeks after full green-up. If the bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when re-growth occurs and bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, apply 4.5 to 8 fluid ounces of this product per acre in shaded conditions or where a lesser degree of suppression is desired.

#### Cut Stump Application

Application of this product to a freshly cut tree stump may be made during site preparation or site renovation to control re-growth and re-sprouting of stumps of many tree species, some of which are listed below.

Citrus Trees: Calamondin; Chironja; Citron; Citrus hybrids; Grapefruit; Kumquat; Lemon; Lime; Mandarin (tangerine); Orange (all); Pummelo; Tangelo (ugli); Tangor

Fruit Trees: Apple; Apricot; Cherry (sweet, sour); Crabapple; Loquat; Mayhaw; Nectarine; Olive; Peach; Pear, Plum/Prune (all); Quince

Nut Trees: Almond, Beechnut; Brazil nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (hazelnut); Hickory Nut; Macadamia; Pecan; Pistachio; Walnut (black, English)

USE INSTRUCTIONS: Cut the tree close to the soil surface and immediately apply a 50- to 100-percent (undiluted) solution of this product to the freshly cut surface using application equipment capable of covering the entire cambium. A delay in application could result in reduced performance. For optimal results, cut the tree during period of active growth and full leaf expansion and apply this product.

#### PRECAUTION:

- DO NOT MAKE A CUT STUMP APPLICATION WHEN THE ROOTS OF ADJACENT DESIRABLE TREES MIGHT BE GRAFTED TO THE ROOTS OF THE CUT STUMP, AS INJURY COULD OCCUR IN THE ADJACENT TREES. Some sprouts, stems or trees can share a common root system. Adjacent trees having a similar age, height and spacing could be an indicator of a shared root system. Whether grafted or shared, injury is likely to occur to adjacent stems or trees when this product is applied to one or more trees sharing a common root system.

#### 9.1 Berry and Small Fruit Crops

**LABELED CROPS:** All cultivars, varieties and/or hybrids of Amur River grape; Aronia berry; Bayberry; Bearberry; Bilberry; Blackberry (including Andean blackberry, arctic blackberry, bingleberry, black satin berry, boysenberry, brombeere, California blackberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, common blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry, Himalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures de ronce, nectarberry, Northern dewberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora); Blueberry (highbush, lowbush); Buffaloberry; Che; Chilean guava; Chokecherry; Cloudberry; Cranberry (including highbush); Currant (black, Buffalo, red, native); Elderberry; European barberry; Gooseberry; Grape; Honeysuckle (edible); Huckleberry; Jostaberry; Juneberry (Saskatoon berry); Kiwifruit (fuzzy, hardy); Ligonberry; Maypop; Mountain pepper berries; Mulberry; Muntries; Partridgeberry; Phalsa; Pincherry; Raspberry (black, red, wild); Riberry; Salal; Schisandra berry; Sea buckthorn; Serviceberry; Strawberry

**TYPES OF APPLICATION:** Those listed in **TREE, VINE AND SHRUB CROPS** section

**PRECAUTIONS:**

- To avoid damage, spray solutions of this product must not be allowed to contact desirable vegetation, including green shoots, canes or foliage.
- In the northeast and Great Lakes regions, apply this product in grape vineyards prior to the end of the bloom stage in order to avoid crop injury, or apply using a shielded sprayer or wiper applicator.
- **USE THIS PRODUCT WITH EXTREME CARE AROUND RASPBERRY, AS SERIOUS CROP DAMAGE CAN OCCUR IF ANY PART OF THE VINE COMES INTO CONTACT WITH THIS PRODUCT.**

**RESTRICTIONS:**

- Plant back interval (PBI): Allow a minimum of 3 days between application of this product and transplanting.
- Pre-harvest interval (PHI): Allow a minimum of 30 days between application and harvest of cranberries or the planting of any crop not listed on this label.
- Pre-harvest interval (PHI): Allow a minimum of 14 days between application and harvest for all other berry and small fruit crops listed here.
- Do not use selective equipment in kiwi.

**Spot Treatment**

**USE INSTRUCTIONS:** Spot treatment application using a handheld sprayer or other appropriate application equipment listed in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label may be used to control weeds in berry and small fruit crops listed in this section.

For control of weeds growing in dry ditches (interior and perimeter) of cranberry production areas, drop water level to remove standing water in ditches and apply a 1- to 2-percent solution of this product with a handheld sprayer to adequately wet the vegetation only; do not spray to the point of runoff. To achieve maximum weed control in dry ditches, apply this product within 1 day after water drawdown to ensure application to actively growing weeds and allow a minimum of 2 days after application before reintroduction of water.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 30 days between spot treatment application and harvest of cranberries.
- Do not apply directly to water.
- Use nozzles that produce medium- to large-sized droplets to minimize spray drift and avoid crop injury.

**Post-Harvest Application in Cranberry Production**

USE INSTRUCTIONS: This product may be applied for weed control after the harvest of berries and small fruits listed in this section. In cranberry bogs, apply this product after cranberry vines are dormant (after they have turned red) using a handheld sprayer, wiper applicator or any other appropriate application equipment listed in the “APPLICATION EQUIPMENT AND TECHNIQUES” section of this label. With a handheld sprayer, apply a 0.5- to 0.8-percent solution of this product to adequately wet the vegetation only; do not spray to the point of runoff. With a handheld boom sprayer, apply 3 to 6 pints of this product per acre.

**PRECAUTIONS:**

- Even though vines appear dormant, contact of this product with desirable vegetation could result in damage or severe plant injury.
- Cranberry plants that are directly sprayed could be killed.

**RESTRICTIONS:**

- Apply this product only after cranberries have been harvested.
- Do not apply to more than 10 percent of the total bog.
- Pre-harvest interval (PHI): Allow a minimum of 6 months between post-harvest application and the next harvest of cranberries.
- Do not apply using aerial application equipment.
- Do not apply directly to water.

## 9.2 Citrus Fruit Crops

**LABELED CROPS:** All cultivars, varieties and/or hybrids of Calamondin; Chironja; Citron; Citrus Hybrids; Grapefruit (including Japanese summer); Kumquat; Lemon; Lime (including Australian desert lime, Australian finger lime, Australian round lime, Brown river finger lime, Mount white, New Guinea wild, Russell river, sweet, and Tahiti); Mandarin (including Mediterranean, Satsuma); Orange (all); Pummelo; Tangelo; Tangerine (Mandarin); Tangor; Uniq Fruit (ugli)

**TYPES OF APPLICATION:** Those listed in Section **TREE, VINE AND SHRUB CROPS** section

**USE INSTRUCTIONS:** The following use instructions pertain to application in Florida and Texas only.

For burndown or control of the weeds listed below, apply this product at the specified rate in 3 to 30 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.

To control goatweed, apply 48 to 72 fluid ounces of this product in 20 to 30 gallons of water per acre when plants are actively growing. Apply 48 fluid ounces per acre when plants are less than 8 inches tall and 72 fluid ounces per acre when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the use of this product in a tank mixture with Krovar I or Karmex could improve weed control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Weed Species	Level of Perennial Weed Control at Various Application Rates (amount of this product per acre)			
	24 fl oz	48 fl oz	2.3 quarts	3.8 quarts
Bermudagrass	B	—	PC	C
Guineagrass				
Texas and Florida Ridge	B	C	C	C
Florida Flatwoods	—	B	C	C
Paragrass	B	C	C	C
Torpedograss	S	—	PC	C

S = Suppression, PC = Partial Control, B = Burndown, C = Control

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 1 day between application and harvest of citrus fruit crops.
- For citron groves, apply as a directed spray only.

### 9.3 Pome Fruit Crops

LABELED CROPS: All cultivars, varieties and/or hybrids of Apple; Azarole; Crabapple; Loquat; Mayhaw; Medlar; Pear (including Asian pear); Quince (including Chinese and Japanese quince); Tejocote

TYPES OF APPLICATION: Those listed in **TREE, VINE AND SHRUB CROPS** section

RESTRICTION:

- Pre-harvest interval (PHI): Allow a minimum of 1 day between application and harvest of pome fruit.

### 9.4 Stone Fruit Crops

LABELED CROPS: Apricot, Cherry (sweet, tart); Nectarine; Olive; Peach; Plum/Prune (all types); Plumcot

TYPES OF APPLICATION: Those listed in **TREE, VINE AND SHRUB CROPS** section

PRECAUTIONS:

- Avoid application near trees with recent pruning wounds or other mechanical injury.
- Apply only near trees that have been planted in the orchard for a minimum of 2 years.
- ENSURE THAT NO PART OF A PEACH TREE IS CONTACTED WITH OVERSPRAY OR DRIFT OF THIS PRODUCT.

RESTRICTIONS:

- Pre-harvest interval (PHI): Allow a minimum of 17 days between application and harvest of stone fruit. In olive groves, apply as a directed spray only.
- Remove suckers and low-hanging limbs a minimum of 10 days prior to application.

### 9.5 Tree Nut Crops

LABELED CROPS: Almond; Beechnut; Betelnut; Brazil nut; Butternut; Cashew; Chestnut; Chinquapin; Coconut; Filbert (hazelnut); Hickory nut; Macadamia; Pecan; Pine nut; Pistachio; Walnut (black, English)

TYPES OF APPLICATION: Those listed in **TREE, VINE AND SHRUB CROPS** section

RESTRICTIONS:

- Pre-harvest interval (PHI): Allow a minimum of 3 days between application and harvest of tree nuts, except coconut.
- Pre-harvest interval (PHI): Allow a minimum of 14 days between application and harvest of coconut.

### 9.6 Tropical and Subtropical Trees and Fruit Crops

LABELED CROPS: Ambarella; Atemoya; Avocado; Banana; Barbados cherry (acerola); Biriba; Blimbe; Breadfruit; Cacao (cocoa) bean; Canistel; Carambola (starfruit); Cherimoya; Coffee; Custard apple; Dates; Durian; Feijoa; Figs; Governor's plum; Guava; Illama; Imbe; Imbu; Jaboticaba; Jackfruit; Longan; Lychee; Mamey apple; Mango; Mangosteen; Marmaladebox (genip); Mountain papaya; Noni (Indian mulberry); Papaya; Pawpaw; Plantain; Persimmon; Pomegranate; Pulasan; Rambutan; Rose apple; Sapodilla; Sapote (black, mamey, white); Spanish lime; Soursop; Star apple; Sugar apple; Surinam cherry; Tamarind; Tea; Ti; Wax jambu

TYPES OF APPLICATION: Those listed in **TREE, VINE AND SHRUB CROPS** section, and as a Bananacide (banana only)

RESTRICTIONS:

- Pre-harvest interval (PHI): Allow a minimum of 1 day between application and harvest in banana, coffee, guava, papaya, and plantain crops.
- Pre-harvest interval (PHI): Allow a minimum of 14 days between application and harvest of all other tropical and subtropical tree fruit listed here.
- In coffee and banana, delay application until 3 months after transplanting to allow the new coffee or banana plant to become

established.

#### **Bananacide (Banana Only)**

USE INSTRUCTIONS: This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus, as well as non-infected banana plants, in order to establish a disease-free buffer around a plantation. Remove all fruit from the plants within the area prior to treatment. Inject 1 milliliter of this concentrated product (undiluted) for every 2 to 3 inches of pseudostem diameter of the banana plant to be controlled. Make the injection at least one foot above the ground, except for very small plants, which can be injected vertically into the top. Any subsequent re-growth must also be destroyed. Mechanically destroy all plants and mats (or units) within a 4-foot radius around a treated mat.

For control of the Banana Bunchy Top Virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant might not show symptoms of the Banana Bunchy Top Virus for as many as 125 days; therefore, it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.

#### **RESTRICTIONS:**

- Do not apply more than 0.6 fluid ounce (17 milliliters) of this product per mat (or unit).
- Do not harvest any fruit or plant material from treated mats (or units) following injection.
- Do not allow livestock to consume treated plant material.
- Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for weed control.

#### **9.7 Vine Crops**

LABELED CROPS: Hops; Passion fruit TYPES OF APPLICATION: Those listed in **TREE, VINE AND SHRUB CROPS section**

USE INSTRUCTIONS: Apply this product for weed control only when green shoots, canes or foliage are not in the spray zone.

#### **RESTRICTION:**

- Pre-harvest interval (PHI): Allow a minimum of 14 days between application and harvest of vine crops.

#### **9.8 Miscellaneous Tree Food Crops**

LABELED CROPS: Cactus (all, including prickly pear, dragon fruit); Palm TYPES OF APPLICATION: Those listed in **TREE, VINE AND SHRUB CROPS section**

#### **9.9 Non-Food Tree Crops**

LABELED CROPS: Pine; Poplar; Eucalyptus; Christmas trees; all other non-food tree crops

TYPES OF APPLICATION: Those listed in **TREE, VINE AND SHRUB CROPS section**

#### **PRECAUTIONS:**

- Avoid contact of spray, drift or mist of this product with foliage or green bark of established Christmas trees and other pine trees.
- Desirable plants can be protected from the spray solution by using shields or coverings of impermeable materials.

#### **RESTRICTION:**

- DO NOT apply this product as a broadcast application over the top of plantations or tree crops.

#### **Site Preparation**

USE INSTRUCTIONS: This product may be used for weed control prior to planting non-food tree crops.

PRECAUTION:

- Protect non-target plants from being sprayed with this product during site preparation application.

#### **Directed Spray, Spot Treatment, Wiper Applicator**

USE INSTRUCTIONS: This product may be applied as a post-directed spray or spot treatment, or applied using a wiper applicator, around established Christmas trees, eucalyptus, poplar, and all other non-food tree crops.

## **10.0 PASTURE GRASSES, FORAGE LEGUMES AND RANGELAND**

USE INSTRUCTIONS: Refer to the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label for application rates of this product for specific weeds. When applied as directed, this product will control those annual and perennial grasses and broadleaf weeds listed. Application rates specified on this label for hard-to-control weeds, or those specified on separate supplemental labeling for this product, supersede rates listed in the "ANNUAL WEEDS RATE SECTION," "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH, TREES AND VINES RATE SECTION" of this label. Additional information on hard-to-control weeds can be found on Fact Sheets published for this product.

### **10.1 Alfalfa, Clover and Other Forage Legumes**

LABELED CROPS: Alfalfa; Clover; Kenaf; Kudzu; Lespedeza; Leucaena; Lupin; Sainfoin; Trefoil; Velvet bean; Vetch (all types)

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Spot Treatment; Wiper Applicator; Preharvest (except kenaf and leucaena); Stand Removal

For directions for use with Glyphosate Tolerant alfalfa, see the "SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label.

#### **Preplant, At-Planting, Preemergence**

USE INSTRUCTIONS: This product may be applied before, during or after planting crops listed in this section, but prior to crop emergence.

RESTRICTION:

- Remove domestic livestock before application.

#### **Spot Treatment, Wiper Applicator**

USE INSTRUCTIONS: This product may be applied as a spot treatment or over the top of crops listed in this section using a wiper applicator. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label. Application may be repeated in the same area at 30-day intervals.

RESTRICTIONS:

- For spot treatment and use with a wiper applicator, apply in areas where the movement of domestic livestock can be controlled.
- Remove domestic livestock before application and wait a minimum of 3 days after application before grazing livestock or harvesting.
- Do not apply this product to more than 10 percent of the total field area at any one time.

#### **Weed Control in Dormant Alfalfa**

USE INSTRUCTIONS: This product will control or suppress many weeds, including quackgrass, downy brome and cheatgrass in dormant alfalfa. Apply 7 to 9 fluid ounces of this product per acre in the spring when alfalfa is dormant, after spring temperatures have warmed enough to encourage weed growth, but prior to initiation of trifoliate leaf expansion of the alfalfa crop. Application made after expansion of the first trifoliate leaf will cause growth reduction and reduced crop yield.

PRECAUTION:

- Improper application of this product to alfalfa can cause crop injury. Do not use this product on dormant alfalfa if a slight yield



reduction in the first cutting cannot be tolerated. Slight discoloration of the alfalfa crop could occur, but will re-green and resume growth under moist soil conditions as effects of this product wear off.

**RESTRICTIONS:**

- Do not add ammonium sulfate to spray solutions of this product for application to dormant alfalfa.
- Do not make more than one application per year.
- Pre-harvest interval (PHI): Allow a minimum of 36 hours after application before grazing livestock or harvesting.

**Preharvest (Except Kenaf and Leucaena), Stand Removal**

USE INSTRUCTIONS: This product may be applied as a broadcast application prior to harvest (except in kenaf and leucaena) in declining stands or in any stand where severe crop injury or destruction is acceptable, or to remove an established stand of any forage legume listed in this section. Application may be made at any time of the year to control annual and perennial weeds, including quackgrass. For control of quackgrass, apply in the spring, late-summer or fall when quackgrass is actively growing. Application for quackgrass control must be followed by deep tillage for complete control. If the crop is to be harvested or grazed by livestock, apply up to 48 fluid ounces of this product per acre in alfalfa and up to 36 fluid ounces per acre in all other legumes listed in this section. For complete removal of established stands of clover, it might be necessary to use a higher application rate, as listed in the "PERENNIAL WEEDS RATE SECTION" of this label.

**PRECAUTION:**

- This application can destroy an alfalfa stand and severely injure or destroy other legume crops listed, such as clover. Preharvest application on alfalfa grown for seed could result in a reduction in germination or vigor. To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the preharvest use of this product on alfalfa grown for seed.

**RESTRICTIONS:**

- Make only one application to an existing crop stand per year.
- Remove domestic livestock before application.
- Foliage within the application area can be harvested and fed to livestock according to the application rates and intervals defined in the following table.
- If applying at a rate greater than those listed here, do not harvest foliage for livestock feed or allow livestock to graze within the application area.

Crop	Maximum Single Preharvest Application Rate (per acre)	Minimum Interval Between Application and Harvest or Livestock Grazing
Alfalfa	48 fluid ounces	36 hours
All other legumes listed	36 fluid ounces	3 days

Crops listed on this label may be planted into the application area at any time; all other crops may be planted 30 days after application.

**10.2 Conservation Reserve Program (CRP)**

TYPES OF APPLICATION: Postemergence Weed Control in Dormant CRP Grasses; Wiper Applicator; Renovation (rotating out of CRP); Site Preparation

**Postemergence Weed Control in Dormant CRP Grasses, Wiper Applicator**

USE INSTRUCTIONS: Apply this product to suppress competitive growth and seed production of undesirable vegetation on CRP land. Application may be made using a wiper applicator to control tall weeds, or as a broadcast application or spot treatment to dormant CRP grasses. For selective weed control using broadcast application equipment, apply 6 to 9 fluid ounces of this product per acre in early-spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late-fall application may be made after desirable perennial grasses have reached dormancy.

**PRECAUTION:**

- Some stunting of CRP perennial grasses will occur if broadcast application is made when plants are not dormant.

**RESTRICTIONS:**

- Do not apply more than 2.3 quarts of this product per acre per year onto CRP land.
- Pre-harvest interval (PHI): No waiting period is required between application and grazing or harvesting for feed.

**Renovation (Rotating Out of CRP), Site Preparation**

USE INSTRUCTIONS: This product may be used to prepare CRP land for crop production. Refer to federal, state or local use guides for CRP renovation information.

**RESTRICTION:**

- Plant back interval (PBI): Crops listed on this label may be planted into the area at any time; all other crops may be planted 30 days after application.

**10.3 Grass Seed and Sod Production**

LABELED CROPS: Any grass (*Gramineae* family), except Corn, Sorghum, Sugarcane and those listed in the "CEREAL AND GRAIN CROPS" section of this label

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Renovation; Removal of Established Stand; Site Preparation; Shielded Sprayer; Wiper Applicator; Spot Treatment; Creating Rows in Annual Ryegrass

**Preplant, At-Planting, Preemergence, Renovation, Removal of Established Stand, Site Preparation**

USE INSTRUCTIONS: This product controls most existing vegetation for purposes of renovating turf or forage grass seed production areas, or for establishing turfgrass grown for sod. This product may be used to destroy undesirable grass vegetation when production fields are converted to alternative species or crops. Do not disturb soil or underground plant parts before application and delay tillage or renovation techniques, including vertical mowing, coring and slicing, for a minimum of 7 days after application to allow for herbicide translocation into underground plant parts.

Apply before, during, or after planting, or for renovation purposes. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the herbicide spray. For maximum control of existing vegetation, delay planting until determining if any re-growth of underground plant parts will occur. Where repeat applications are necessary, sufficient re-growth must be attained prior to application. For warm-season grasses, such as bermudagrass, summer or fall application provides optimal control. Broadcast application of this product may be used to control sod remnants or other unwanted vegetation after sod is harvested. Application rates of up to 3.75 quarts per acre may be used to totally remove an established stand of hard-to-kill grass species.

**RESTRICTIONS:**

- If application rate is 74 fluid ounces of this product per acre or less, no waiting period between application and feeding or livestock grazing is required. If the rate is greater than 74 fluid ounces per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.
- Plant back interval (PBI): Crops listed on this label may be planted into the area at any time; all other crops may be planted 30 days after application.

**Shielded Sprayer**

USE INSTRUCTIONS: Apply 24 to 72 fluid ounces of this product in 10 to 20 gallons of water per acre using a shielded sprayer to control weeds between grass seed rows. Uniform planting in straight rows will aid shielded sprayer application. Optimal results can be obtained when the grass seed crop is small enough to easily pass by the protective shields. See additional instructions on the use of shielded

sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**PRECAUTION:**

- Contact of this product in any manner to any vegetation to which application is not intended could cause damage.

#### **Wiper Applicator**

USE INSTRUCTIONS: This product may be applied over the top of desirable grasses using a wiper applicator for the control of tall weeds. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

#### **PRECAUTION:**

- Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation could result in discoloration, stunting or destruction.

#### **Spot Treatment**

USE INSTRUCTIONS: Apply a 1-percent solution of this product using a handheld sprayer to control weeds within established vegetation prior to heading of grasses grown for seed or to control sod remnants or other unwanted vegetation after sod is harvested.

#### **PRECAUTIONS:**

- This product will kill the desirable grasses along with the weeds.
- Take care not to spray or allow spray to drift outside the target area in order to avoid unwanted crop destruction.

#### **Creating Rows in Annual Ryegrass**

USE INSTRUCTIONS: Use low-pressure nozzles or drop nozzles designed to target the application over a narrow band. Set nozzle height to establish the desired row spacing and apply 12 to 24 fluid ounces of this product per acre. Optimal results can be obtained when application is made before ryegrass reaches 6 inches in height. Use a higher application rate within this range when ryegrass is greater than 6 inches in height.

#### **PRECAUTIONS:**

- Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction.

### **10.4 Pastures**

LABELLED CROPS: Bahiagrass; Bermudagrass; Bluegrass; Brome; Fescue; Guinea grass; Kikuyugrass; Orchardgrass; Pangola grass; Ryegrass; Timothy; Wheatgrass and any grass (*Gramineae* family), except Corn, Sorghum, Sugarcane and those listed in the "CEREAL AND GRAIN CROPS" section of this label

TYPES OF APPLICATION: Preplant; Preemergence; Pasture Renovation; Spot Treatment; Wiper Applicator; Postemergence Weed Control (broadcast application)

#### **Preplant, Preemergence, Pasture Renovation**

USE INSTRUCTIONS: This product may be applied for weed control prior to planting or emergence of forage grasses. This product may also be applied to control perennial pasture species listed on this label prior to re-planting.

#### **RESTRICTIONS:**

- Pre-harvest interval (PHI): If application rates total 2.3 quarts of this product per acre or less, no waiting period between application and feeding or livestock grazing is required.
- Pre-harvest interval (PHI): If the rate is greater than 2.3 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.
- Plant back interval (PBI): Crops listed on this label may be planted into the area at any time; all other crops may be planted 30

days after application.

### **Spot Treatment, Wiper Applicator**

USE INSTRUCTIONS: This product may be applied in pastures as a spot treatment or over the top of desirable grasses using a wiper applicator to control tall weeds. To achieve maximum performance, remove domestic livestock before application and wait a minimum of 7 days after application before grazing livestock or harvesting for feed. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

#### **RESTRICTIONS:**

- For spot treatment or use with a wiper applicator at rates of 2.3 quarts per acre or less, this product may be applied over the entire pasture or any portion of it.
- At rates above 2.3 quarts per acre, this product may be applied over no more than 10 percent of the total pasture at any one time.
- Application may be repeated on the same area at 30-day intervals.

### **Postemergence Weed Control (Broadcast Application)**

USE INSTRUCTIONS: This product may be applied in pastures to suppress competitive growth and seed production of annual weeds and other undesirable vegetation. For selective weed control using broadcast application equipment, apply 9 to 12 fluid ounces of this product per acre in early-spring before desirable perennial grasses break dormancy and initiate green growth. Late-fall application may be made after desirable perennial grasses have reached dormancy.

#### **PRECAUTIONS:**

- Some stunting of perennial grasses will occur if broadcast application is made when plants are not dormant.
- Higher application rates may be used for hard-to-control weeds; however, higher rates will cause stand reduction.

#### **RESTRICTIONS:**

- Pre-harvest interval (PHI): No waiting period is required between application and grazing or harvesting for feed.
- Do not apply more than 2.3 quarts of this product per acre per year onto pasture grasses except for renovation use as described on this label.
- Plant back interval (PBI): If replanting is needed due to severe stand reduction, wait a minimum of 30 days after application before planting any crop not listed on this label.

## **10.5 Rangeland**

#### **TYPES OF APPLICATION: Postemergence**

USE INSTRUCTIONS: This product will control or suppress many annual weeds growing on perennial cool- and warm-season grass rangeland. Slight discoloration of the desirable grasses could occur, but will re-green and resume growing under moist soil conditions as effects of this product wear off.

Preventing seed production is critical to the control of invasive annual grassy weeds on rangeland. Follow-up applications in sequential years can be used to eliminate most of the viable seeds. Delay grazing of the area after application of this product to allow desirable perennials to grow, flower and reseed the area.

Apply 9 to 12 fluid ounces of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass on rangeland. Apply when most mature brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur after spring rains further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Apply this product in the fall in areas where spring moisture is normally limited and fall germination allows for good weed growth and weed seed depletion.

For control of medusahead, apply 12 fluid ounces of this product per acre at the 3-leaf stage. Delaying application beyond this stage will result in reduced or unacceptable control. Controlled burning prior to application can be useful in eliminating the thatch layer produced by slowly decaying culms. Allow new growth to occur before applying this product after a burn. Repeat applications in subsequent years are necessary to eliminate the seedbank before re-establishing desirable perennial grasses in medusahead-dominated rangeland.

#### **RESTRICTIONS:**

- Do not apply more than 72 fluid ounces of this product per acre per year on rangeland.
- Do not add ammonium sulfate to the spray mixture when applying this product on rangeland grasses.
- No waiting period between application and feeding or livestock grazing is required.

## 11.0 SPECIFIED GLYPHOSATE TOLERANT CROPS

SPECIFIED GLYPHOSATE TOLERANT\* CROPS CONTAIN A PATENTED GENE THAT PROVIDES TOLERANCE TO GLYPHOSATE, THE ACTIVE INGREDIENT IN THIS PRODUCT. THIS PRODUCT WILL CAUSE SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS IF APPLIED TO CROPS THAT ARE NOT GLYPHOSATE TOLERANT. AVOID CONTACT OF THIS PRODUCT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT DO NOT CONTAIN A GLYPHOSATE-TOLERANCE GENE, AS SEVERE PLANT INJURY OR DESTRUCTION WILL RESULT.

Specified glyphosate tolerant crops must be purchased from an authorized licensed seed supplier.

**\* Contact the seed manufacturer, seed distributor or seed supplier to determine if the seed variety is designated and supported as glyphosate tolerant.**

**Crops not containing a gene that expresses glyphosate tolerance will not be tolerant to Nufarm Credit 5.4 Herbicide and severe crop injury and/or death may occur. Do not allow spray to contact foliage or green tissue of desirable vegetation other than crops tolerant to the active ingredient in Nufarm Credit 5.4 Herbicide.**

The directions for use in the sections that follow, or those published separately on supplemental labeling for this product, include all applications of this product that may be made onto a specified specified glyphosate tolerant crop during the complete year. DO NOT combine these directions for use with the directions for use with the same crops listed in the "ANNUAL AND PERENNIAL CROPS" and "PASTURE GRASSES, FORAGE LEGUMES AND RANGELAND" sections of this label, which are intended for crops that do not contain a Glyphosate-tolerance gene.

**NOTE:** Glyphosate Tolerant seed, and the method of selectively controlling weeds in a Glyphosate Tolerant crop, are protected under several

U.S. Patents, including 5,352,605 and 5,633,435. *[This list will be updated at the time of printing, if necessary.]* A license to use Glyphosate Tolerant seed must be obtained prior to planting. Monsanto retains ownership of the gene and process technologies, and the Purchaser of the seed receives the right to use the licensed genes and technologies subject to the limited use license conditions. Seed containing a Glyphosate Tolerant trait cannot be used for research and demonstration, reverse engineering or in connection with herbicide registration. Progeny seed containing a Glyphosate Tolerant trait may not be saved for replanting or transferred to others for replanting. Contact your Authorized Retailer for information on obtaining a limited use license for Glyphosate Tolerant seed or any specified glyphosate tolerant seed.

**USE INSTRUCTIONS:** Refer to the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label for application rates for specific weeds. When applied as directed, this product will control the annual and perennial grasses and broadleaf weeds listed. Observe the maximum application rates and crop stage timings specified for individual specified glyphosate tolerant crops in the sections that follow.

**Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before being used to apply this product over the top of specified glyphosate tolerant crops. Follow the cleaning procedures specified on the label of the product(s) previously used. **THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.**

**ATTENTION:** AVOID DRIFT. USE EXTREME CARE WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS THAT DO NOT CONTAIN A GLYPHOSATE-TOLERANCE GENE.

**Ground broadcast application** – Apply this product in 5 to 20 gallons of spray solution per acre, unless otherwise directed. Select proper nozzles and spray pressure settings to avoid spraying a fine mist. For optimal results with ground application equipment, use flat-fan nozzles. Check for even distribution of spray droplets.

**Aerial application** – Unless otherwise prohibited, all applications of this product described in this section may be made using aerial application equipment, where appropriate, provided that the applicator complies with the precautions and restrictions specified on this label and on all supplemental labeling published separately for this product. Apply this product in 3 to 15 gallons of water per acre. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for important information on aerial application and procedures for avoiding spray drift that could cause injury to any vegetation not intended for application. Use of appropriate

buffer zones will help prevent injury to adjacent vegetation.

See the "MIXING" and "APPLICATION EQUIPMENT AND TECHNIQUES" sections of this label for additional directions and restrictions on the application of this product.

**TANK MIXTURES:** Tank mixtures of this product with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers could result in reduced weed control or crop injury when applied over the top of specified glyphosate tolerant crops. Read the label of all products used in the tank mixture prior to use to determine the potential for crop injury. Always read and follow label directions for all products in the tank mixture. Use all products according to rates and timing specified on the product label. Always predetermine the compatibility of tank-mix products together in the carrier by mixing small proportional quantities in advance. Nufarm has not tested this product with all tank-mix product formulations for compatibility, antagonism or performance. To the extent consistent with Applicable law, Buyer and all users are responsible for any and all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not specifically listed on this label or on separate supplemental labeling or Fact Sheets for this product. See the "MIXING" section of this label for more information on tank mixtures.

[*Optional label text:* Unless otherwise directed, nonionic surfactant may be added to the spray solution for application to specified glyphosate tolerant crops. The addition of certain surfactants to a spray solution of this product could result in some crop response including leaf speckling or leaf necrosis due to the surfactant. Refer to the individual specified glyphosate tolerant crop sections that follow, or to separate supplemental labeling, for additional precautions or restrictions on the use of surfactants. Refer to the "MIXING" section of this label for additional information on the use of surfactants with this product.]

Ammonium sulfate may be added to spray solutions of this product for application to specified glyphosate tolerant crops. Refer to the "MIXING" section of this label for instructions on the use of ammonium sulfate.

The following use directions are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, apply this product as a preplant burndown application to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morning glory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times, or suppressed (stunted) weeds, might require a second application of this product for complete control. Make second application after some re-growth has occurred and a minimum of 10 days after a previous application of this product.

Application rates of this product specified on this label for hard-to-control weeds, or those specified on separate supplemental labeling for this product, supersede rates in the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label. Additional information on hard-to-control weeds can be found on Fact Sheets published for this product.

#### RESTRICTIONS:

- Observe the maximum application rates stated throughout this label.
- Maximum application rates apply to the use of this product combined with the use of any and all other herbicides containing glyphosate, whether applied separately or as mixtures.
- Calculate the application rates (glyphosate acid equivalents) and ensure that the total use of this and specified glyphosate-containing products does not exceed the stated maximum rate.

See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

When applying this product as a tank mixture with one or more products, refer to each individual tank-mix product label for restrictions and apply the tank mixture in accordance with the most restrictive statements for each product in the tank.

### 11.1 Glyphosate Tolerant Alfalfa

**TYPES OF APPLICATION:** Preplant; At-planting; Preemergence; Postemergence (In-crop)

**USE INSTRUCTIONS:** Refer to the following table for maximum application rates of this product.

Maximum Application Rates	
Combined total per year for all applications, including Preplant during year of establishment	6.0 quarts per acre
Preplant, At-planting and Preemergence single application	1.5 quarts per acre
Combined total per year for In-crop application on newly established and established stands	4.5 quarts per acre

See the "SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label for information regarding the use of this product in Glyphosate Tolerant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

#### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Glyphosate Tolerant alfalfa.

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied over the top of Glyphosate Tolerant alfalfa (in-crop) from emergence until 5 days prior to cutting. To maximize crop yield and quality potential of the forage and hay, apply this product after weeds have emerged, but before alfalfa growth or re-growth interferes with spray coverage of the target weeds.

Refer to the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label for application rates for specific weeds. When applied as directed, this product will control the annual and perennial grasses and broadleaf weeds listed. This product will also suppress or control the parasitic weed dodder (*Cuscuta* spp.) in Glyphosate Tolerant alfalfa. More than one application might be necessary for complete control.

**New Stand Establishment (Seeding Year)** – Due to the biology and breeding constraints of alfalfa, up to 10 percent of the seedlings might not contain a Glyphosate Tolerant gene and will not survive after the first application of this product. To eliminate the undesirable effects of stand gaps created by this loss of plants, make a single application of at least 24 fluid ounces of this product per acre at or before the 4 trifoliolate growth stage. Refer to the following table for application rates during stand establishment (seeding year).

NEW STAND ESTABLISHMENT (Seeding Years) Application Rates	
<b>Prior to First Cutting</b>	
From emergence up to 4 trifoliolate leaves	24 to 48 fluid ounces per acre
From 5 trifoliolate leaves up to 5 days before <i>first</i> cutting	Up to 48 fluid ounces per acre
<b>After First Cutting</b>	
In-crop application, per cutting, up to 5 days before cutting	Up to 48 fluid ounces per acre

TANK MIXTURES: Up to 48 fluid ounces of this product per acre may be applied postemergence (in-crop) over the top of Glyphosate Tolerant alfalfa in the seeding year in a tank-mix with the following products after weeds have emerged, but before alfalfa growth or re- growth interferes with spray coverage of the target weeds. Ensure that the product used in the tank-mix is labeled for application postemergence (in-crop) to alfalfa. Read and follow label directions for all products in the tank mixture.

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[clethodim; imazamox; imazethapyr; sethoxydim; quizalofop p-ethyl ]

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**Established Stands (Non-seeding Year)** – Refer to the following table for directions and application rates for in-crop application to established stands of alfalfa (non-seeding year).

TANK MIXTURES: This product may be applied postemergence (in-crop) over the top of established stands of Roundup Ready alfalfa in tank mixtures described below according to the growing condition of the crop. Ensure that the product used is labeled for application postemergence (in-crop) to alfalfa. Read and follow label directions for all products in the tank mixture.

**Actively growing alfalfa:** For control of emerged annual grasses and broadleaf weeds when alfalfa is actively growing, this product may be applied at up to 48 fluid ounces per acre in a tank mixture with the following herbicides.

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[ quizalofop p-ethyl ]

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**Dormant Alfalfa:** For control of emerged annual grasses and broadleaf weeds when alfalfa is dormant, this product may be applied at up to 48 fluid ounces per acre in a tank mixture with the following herbicides when daily temperatures remain above freezing.

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[imazamox; imazethapyr; metribuzin; pronamide; propyzamide ]

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**PRECAUTIONS:**

- Where Glyphosate Tolerant alfalfa is grown with a companion or cover crop, or is over-seeded with a second species, in-crop (over- the-top) application of this product will eliminate the non-Glyphosate Tolerant (non-Glyphosate-tolerant) species.

**RESTRICTIONS:**

- Do not exceed 48 fluid ounces per acre for any single in-crop application of this product.
- Sequential applications of this product must be a minimum of 7 days apart.
- The combined total per year for all in-crop applications in both newly established (seeding year) and established stands (non-seeding year) must not exceed 4.5 quarts (144 fluid ounces) per acre.
- Do not apply to frozen or snow covered ground.
- Remove domestic livestock before application.
- Wait a minimum of 5 days after application before grazing, or cutting and feeding of forage and hay.

### **11.2 Glyphosate Tolerant Canola (Spring Varieties)**

Glyphosate Tolerant spring canola is defined as those Glyphosate Tolerant canola varieties that are seeded in the spring and harvested in the fall and do not enter a winter dormancy period.

**TYPES OF APPLICATION:** Preplant; At-Planting; Preemergence; Postemergence (In-crop); Postemergence (In-crop) in Hybrid Seed Production Only

**USE INSTRUCTIONS:** Refer to the following table for the maximum application rates for this product with spring varieties of Glyphosate Tolerant canola.

Maximum Application Rates	
Total for all Preplant, At-Planting, Preemergence applications	48 fluid ounces per acre
Total for all In-crop applications from emergence to 6-leaf stage	24 fluid ounces per acre

See the "SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label for information regarding the use of this product in Glyphosate Tolerant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

#### **Preplant, At-Planting, Preemergence**

**USE INSTRUCTIONS:** This product may be applied before, during or after planting Glyphosate Tolerant spring canola.

**RESTRICTIONS:**

- Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 48 fluid ounces per acre per year.

### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied postemergence (in-crop) to spring varieties of Glyphosate Tolerant canola from emergence through the 6-leaf stage of development, unless otherwise directed. Application made during bolting or flowering could result in crop injury and yield loss. To maximize yield potential, eliminate competing weeds early.

**Single Application** – Apply 12 to 18 fluid ounces of this product per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications as this could result in temporary yellowing, delayed flowering, and/or growth reduction. Similar crop injury could result when more than 12 fluid ounces per acre is applied after the 4-leaf stage.

**Sequential Application** – Apply 12 fluid ounces of this product per acre to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential application works better for control of early emerging annual and perennial weeds, such as Canada thistle and quackgrass, or whenever more than one application is needed for acceptable weed control.

#### RESTRICTIONS:

- No more than two in-crop (over-the-top) broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application must not exceed 24 fluid ounces of this product per acre.
- Pre-harvest interval (PHI): Allow a minimum of 60 days between application and canola harvest.

### Postemergence (In-crop) in Hybrid Seed Production Only

THIS POSTEMERGENCE APPLICATION IS FOR USE ONLY IN HYBRID CANOLA SEED PRODUCTION OF BOTH SPRING AND WINTER VARIETIES. DO NOT MAKE THIS APPLICATION ON CANOLA GROWN FOR FOOD OR FEED.

This product may be applied at a rate of between 12 and 24 fluid ounces per acre from emergence until pollination is complete or near completion for the control of non-Glyphosate-tolerant canola pollen parental line(s) in hybrid canola seed production fields containing both Glyphosate Tolerant canola line(s) and non-Glyphosate-tolerant line(s). Sequential applications may be made for the control of non-Glyphosate tolerant pollen parental line(s) up to a maximum total application rate of 24 fluid ounces per acre.

#### RESTRICTIONS:

- Allow a minimum of 5 days between sequential applications.
- Maximum total application rate of this product for ALL postemergence (in-crop) applications in hybrid canola seed production fields, including application for weed control and control of non-Glyphosate-tolerant canola, is 24 fluid ounces per acre.

### 11.3 Glyphosate Tolerant Canola (Winter Varieties)

Glyphosate Tolerant winter canola is defined as those Glyphosate Tolerant canola varieties that are seeded in early-fall and harvested the following spring or summer. Winter canola varieties are intended to enter a cold period dormancy in the winter.

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop)

USE INSTRUCTIONS: Refer to the following table for the maximum application rates of this product with winter varieties of Glyphosate Tolerant canola.

Maximum Application Rates	
Total for all Preplant, At-Planting, Preemergence applications	48 fluid ounces per acre
Total for all In-crop applications from emergence to canopy closure or prior to bolting in the spring	48 fluid ounces per acre

See the “GLYPHOSATE TOLERANT AND SPECIFIED GLYPHOSATE TOLERANT CROPS” section of this label for information regarding the use of this product in Glyphosate Tolerant crops. See the “PRODUCT INFORMATION” section of this label for more information on Maximum Application Rates.

### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Glyphosate Tolerant winter canola.

## Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied to winter varieties of Glyphosate Tolerant canola from emergence to canopy closure in the fall and prior to bolting in the spring. Application made during or after bolting could result in crop injury and yield loss. To maximize yield potential, eliminate competing weeds early.

Some weeds with multiple germination times, or suppressed (stunted) weeds, or weeds that have overwintered, might need a sequential application of this product for control. Make the second application after some re-growth has occurred and a minimum of 60 days after the initial application of this product.

**Single Application** – Apply 18 to 24 fluid ounces of this product per acre in the fall when weeds are small and actively growing. Use a higher rate within this range when weed densities are high, when weeds have overwintered or when weeds become large and well established. Application of more than 18 fluid ounces per acre prior to the 6-leaf stage could result in reduced crop growth in the fall. Avoid spray overlaps as this could result in temporary yellowing and/or growth reduction.

**Sequential Application** – Apply 12 to 24 fluid ounces of this product per acre to 2-leaf or larger canola in the fall, followed by a sequential application at the same rate and at a minimum interval of 60 days, but before bolting in the spring. Sequential application works best for control of early emerging annual weeds and winter emerging weeds, such as downy brome, jointed goatgrass and ryegrass, and for weeds that have overwintered. This product will control or suppress most perennial weeds. For some perennial weeds, a sequential application might be needed to reduce competition with the crop.

### RESTRICTIONS:

- No more than two over-the-top broadcast applications may be made from crop emergence up to the onset of bolting and the total in-crop application must not exceed 48 fluid ounces of this product per acre.
- Pre-harvest interval (PHI): Allow a minimum of 60 days between application and harvest of canola grain.
- No waiting period is required between application and open grazing of livestock.

## 11.4 Specified glyphosate Tolerant Corn

**Contact the seed manufacturer, seed distributor or seed supplier to determine if the seed variety is designated and supported as glyphosate tolerant.**

TYPES OF APPLICATIONS: Preplant, Pre emergence, At-Planting, Postemergence (In-Crop), Spot Treatment, Preharvest, Post-Harvest.

Maximum Application Rates	
Combined total per year for all applications	6.0 quarts per acre
Total of Preplant, At-Planting, Preemergence applications	3.8 quarts per acre
Total in-crop applications from emergence through the V8 stage or 30 inches	48 fluid ounces per acre
Maximum Preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	24 fluid ounces per acre

### Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank mixture before, during or after planting corn.

TANK MIXTURES: This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso or Micro-Tech at 50 to 100 percent of labeled rate. Refer to the specific product label and observe all precautions and limitations on the label for any preemergence herbicide application, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines—the more restrictive requirements apply.

**NOTE:** For maximum weed control, a postemergence (In-Crop) application of this product should be applied following the use of less than labeled rates of the preemergence residual products listed above.

### Postemergence (In-Crop)

USE INSTRUCTIONS: This product may be applied postemergence to specified glyphosate tolerant corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first.

When applied as directed, this product controls labeled annual grass and broadleaf weeds in specified glyphosate tolerant corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. The post-emergent application of 18 to 24 fluid ounces per acre of this product should be made before the weeds reach a height and/or density that the weeds become competitive with the crop, generally 4 inch tall weeds or less.

This product may be applied alone as a postemergence In-Crop application to provide control of emerged weeds listed on this label. If new flushes of weeds occur, a sequential application of this product at 18 to 24 fluid ounces per acre will control the labeled grasses and broadleaf weeds.

TANK MIXTURES: This product may be applied in tank mixture with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness

Xtra 5.6L or Micro-Tech at 50 to 100 percent of labeled rate. This product may be applied in tank mixture with Permit® and atrazine at labeled rates. Refer to the specific product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines—the more restrictive requirements apply. Tank mixtures of Nufarm Credit 5.4 Herbicide with other products may impact crop tolerance and increase risk of crop injury.

<b>Tank-Mix Partner</b>	<b>Maximum Height of Corn For Application</b>
Degree Degree Xtra Harness Harness Xtra Harness Xtra 5.6L	11 inches
Bullet* Micro-Tech*	5 inches
Permit	30 inches
Atrazine	12 inches

\*Bullet and Micro-Tech are not registered for use as a post emergence application in Texas.

**PRECAUTION:**

- See the “SPECIFIED GLYPHOSATE TOLERANT CROPS” section of this label for precautionary instructions for use in specified glyphosate tolerant crops.

**RESTRICTIONS:**

- Single In-Crop applications of this product are not to exceed 24 fluid ounces per acre.
- Sequential In-Crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 48 fluid ounces per acre per growing year.
- Allow a minimum of 10 days between In-Crop applications of this product.
- Pre-harvest interval (PHI): Allow a minimum of 50 days between application of this product and harvest of corn forage.

**Preharvest**

USE INSTRUCTIONS: In specified glyphosate tolerant corn, up to 24 fluid ounces per acre of this product can be applied preharvest. Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).

**RESTRICTION:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest.

**Post-Harvest**

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

**RESTRICTION:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

### 11.5 Field Corn Hybrids with filed Roundup Ready 2 Technology

Field corn hybrids with Roundup Ready 2 Technology include Roundup Ready Corn 2 and field corn seed products displaying the Roundup Ready 2 Technology logo.

The directions for use in this section apply only to use on FIELD CORN hybrids with Roundup Ready 2 Technology. For directions for use on SWEET CORN hybrids that contain Roundup Ready 2 Technology, see the “Sweet Corn Hybrids with Roundup Ready 2 Technology” section of this label. [*Alternative text:* For directions for use on Roundup Ready Sweet Corn, see the “Roundup Ready Sweet Corn” section of this label.]

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop); Spot Treatment; Preharvest; Post-Harvest; Postemergence (In-crop) for Tassel Control in Roundup Hybridization Systems Only

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with field corn hybrids with Roundup Ready 2 Technology.

Maximum Application Rates	
Combined total per year for all applications	6.0 quarts per acre
Total for all Preplant, At-Planting, Preemergence applications	3.8 quarts per acre
Maximum single In-crop application rate up to 48-inch corn	36 fluid ounces per acre
Total for all In-crop applications from emergence through 48-inch corn	72 fluid ounces per acre

\*See RESTRICTIONS for Preharvest application

See the "ROUNDUP READY AND SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label for information regarding the use of this product in Roundup Ready crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

**PRECAUTION:**

- The use of the in-crop (over-the-top) rates described in this section on other than field corn hybrids with Roundup Ready 2 Technology could cause crop injury and reduced yields.

**Preplant, At-Planting, Preemergence**

USE INSTRUCTIONS: This product may be applied alone or in a tank mixture before, during or after planting field corn hybrids with Roundup Ready 2 Technology.

TANK MIXTURES: This product may be tank-mixed with the following products. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre. Ensure that the product used is labeled for application prior to emergence of field corn. Read and follow label directions for all products in the tank mixture.

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[2,4-D; acetochlor; alachlor; atrazine; bicyclopyrone; carfentrazone-ethyl; clopyralid; dicamba; diflufenzopyr; dimethenamid; dimethenamid-p; flufenacet; flumetsulam; flumiclorac pentyl ester; isoxaflutole; linuron; metolachlor; s-metolachlor; metribuzin; pendimethalin; rimsulfuron; saflufenacil; simazine; thiencazone-methyl ]

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**RESTRICTIONS:**

- Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.8 quarts per acre per year.
- Application of 2,4-D or dicamba must be made a minimum of 7 days prior to planting corn.

**NOTE:** For maximum weed control, make a postemergence (in-crop) application of this product following the use of a preemergence residual product listed above.

**Postemergence (In-crop)**

USE INSTRUCTIONS: This product may be applied alone or in a tank-mix over the top of field corn hybrids with Roundup Ready 2 Technology from emergence through the V8 stage (8 leaves with collars), or until corn plant height reaches 30 inches (freestanding), whichever comes first, unless otherwise directed. Use drop nozzles for optimum spray coverage and weed control when corn plant height is 24 to 30 inches. When corn plants are 30 to 48 inches tall (freestanding), apply this product using **only** ground application equipment fitted with drop nozzles aligned to avoid spraying into the whorls of the corn plants. Maximum single in-crop application rate of this product up to 48-inch field corn is 36 fluid ounces per acre. Total in-crop application of this product from corn plant emergence through 48 inches in height must not exceed 72 fluid ounces per acre.

When applied as directed, this product will control annual grasses and broadleaf weeds listed on this label. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product. Make a postemergence application of 18 to 24 fluid ounces of this product per acre before weeds exceed 4 inches in height (before they become competitive with the crop). Repeat this application before new flushes of weeds exceed 4 inches in height.

TANK MIXTURES: This product may be tank-mixed with the following products. Ensure that the product used is labeled for application

postemergence (in-crop) to field corn. Read and follow label directions for all products in the tank mixture.

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[2,4-D; acetochlor; alachlor; atrazine; carfentrazone-ethyl; clopyralid; dicamba; diflufenzopyr; flumetsulam; flumiclorac pentyl ester; foramsulfuron; halosulfuron-methyl; iodosulfuron-methylsodium; isoxaflutole; mesotrione; nicosulfuron; rimsulfuron; trembotrione; thiencazone-methyl; thifensulfuron methyl; topramezone ]

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**RESTRICTIONS:**

- Allow a minimum of 10 days between in-crop applications of this product.
- Pre-harvest interval (PHI): Allow a minimum of 50 days between application of this product and harvest of corn forage or grain.

**Preharvest**

USE INSTRUCTIONS: Up to 24 fluid ounces of this product per acre may be applied for annual and perennial weed control prior to harvest when kernel fill is complete and the corn is physiologically mature (black layer formed) and grain moisture is 35 percent or less.

**RESTRICTIONS:**

- A preharvest application may be made only if the combined total of previously applied over-the-top or drop nozzle applications does not exceed 48 fluid ounces of this product per acre.
- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest or feeding of corn stover or grain.

**Post-Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after crop harvest. Higher rates might be needed for control of large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for post-harvest application in field corn. Read and follow label directions for all products in the tank mixture.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest or the feeding of vegetation within the application area.
- Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

**Postemergence (In-crop) for Tassel Control in Roundup Hybridization Systems Only**

THIS APPLICATION IS FOR USE ONLY IN SEED PRODUCTION OF CORN HYBRIDS USING THE ROUNDUP HYBRIDIZATION SYSTEM (RHS). DO NOT MAKE THIS APPLICATION ON CORN GROWN FOR FOOD OR FEED.

The RHS designation indicates that the corn contains Monsanto proprietary gene technology that allows for tassel-only susceptibility to this product. Use of this product on corn hybrids or inbreds that are not designated as RHS or as corn containing Roundup Ready 2 Technology could result in severe crop injury and yield loss.

USE INSTRUCTIONS: This product may be applied at rates of between 12 and 36 fluid ounces per acre as an over-the-top broadcast application for tassel control in RHS-based seed corn production fields from the V8 stage until either the V13 stage or 100 GDU (Growing Degree Units) before flowering.

**RESTRICTIONS:**

- Make no more than two applications of this product for tassel control.
- The maximum total application rate of this product for tassel control is 72 fluid ounces.
- The maximum combined total amount of this product that may be applied per year for both weed control and tassel control is 6.0 quarts per acre.

## 11.6 Sweet Corn Hybrids with Roundup Ready 2 Technology [Alternative heading: Roundup Ready Sweet Corn]

[Optional statement if using the title with Roundup Ready 2 Technology: Sweet corn hybrids with Roundup Ready 2 Technology include Roundup Ready Sweet Corn and sweet corn seed products displaying the Roundup Ready 2 Technology logo.]

The directions for use in this section apply only to use on SWEET CORN hybrids with Roundup Ready 2 Technology [Alternative text: The directions for use in this section apply only to use on Glyphosate Tolerant Sweet Corn]. For directions for use on FIELD CORN hybrids that contain Roundup Ready 2 Technology, see the “Field Corn Hybrids with Roundup Ready 2 Technology” section of this label.

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop)

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with sweet corn hybrids with Roundup Ready 2 Technology. [Alternative text: Refer to the following table for maximum application rates of this product with Roundup Ready sweet corn.]

Maximum Application Rates	
Combined total per year for all applications	6.0 quarts per acre
Total for all Preplant, At-Planting, Preemergence applications	3.8 quarts per acre
Maximum single In-crop application rate up to 48-inch sweet corn	1.5 quarts per acre
Total for all In-crop applications from emergence through 48-inch sweet corn	4.5 quarts per acre

See the “SPECIFIED GLYPHOSATE TOLERANT CROPS” section of this label for information regarding the use of this product in Glyphosate Tolerant crops. See the “PRODUCT INFORMATION” section of this label for more information on Maximum Application Rates.

### PRECAUTION:

- The use of the in-crop (over-the-top) applications described in this section on other than sweet corn hybrids with Roundup Ready 2 Technology could cause crop injury and reduced yields. [Alternative text: The use of the in-crop (over-the-top) applications described in this section on other than Glyphosate Tolerant sweet corn could cause crop injury and reduced yields.]

### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied alone or in a tank mixture before, during or after planting sweet corn hybrids with Roundup Ready 2 Technology. [Alternative text: This product may be applied alone or in a tank mixture before, during or after planting Glyphosate Tolerant sweet corn.]

TANK MIXTURES: This product may be tank-mixed with the residual herbicide products listed below for maximum weed control. Ensure that the product used is labeled for application prior to emergence of sweet corn. Read and follow label directions for all products in the tank mixture. Apply these tank mixtures in 10 to 20 gallons of water or in 10 to 60 gallons of nitrogen solution per acre.

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[acetochlor; alachlor; atrazine; carfentrazone-ethyl; dimethenamid-p; metolachlor; s-metolachlor]

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### RESTRICTION:

- Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.8 quarts per acre per year.

### Postemergence (In-crop)

USE INSTRUCTIONS: Apply this product alone or in a tank mixture over the top of [Alternative text: Glyphosate Tolerant] sweet corn [Alternative text: hybrids with Roundup Ready 2 Technology] from emergence through the V8 stage (8 leaves with collars), or until sweet corn plant height reaches 30 inches (freestanding), whichever comes first. Use drop nozzles for optimum spray coverage and weed control when sweet corn plant height is 24 to 30 inches. When sweet corn plants are 30 to 48 inches tall (freestanding), apply this product using only ground application equipment fitted with drop nozzles aligned to avoid spraying into the whorls of the sweet



corn plants. Avoid spraying if the crop has reached the reproductive stage. Maximum single in-crop application rate of this product up to 48-inch sweet corn is 48 fluid ounces per acre. Total in-crop application of this product from emergence through 48 inches in height must not exceed 4.5 quarts (144 fluid ounces) per acre per growing year.

When applied as directed, this product will control annual grasses and broadleaf weeds listed on this label. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product. Apply 18 to 24 fluid ounces of this product per acre before weeds exceed 4 inches in height or before they become competitive with the crop. If new flushes of weeds occur, a sequential application of 18 to 24 fluid ounces per acre may be made before weeds exceed 4 inches in height.

**TANK MIXTURES:** This product may be tank-mixed with the following products. Ensure that the product used is labeled for application postemergence (in-crop) to sweet corn. Read and follow label directions for all products in the tank mixture.

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[ atrazine; carfentrazone-ethyl; foramsulfuron; mesotrione; trembotrione; tropamezone ]

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**RESTRICTIONS:**

- Allow a minimum of 10 days between in-crop applications of this product.
- Do not apply atrazine in a tank-mix with this product when sweet corn plants are greater than 12 inches tall.
- Pre-harvest interval (PHI): Allow a minimum of 30 days between application of this product and harvest of sweet corn forage or grain.

**11.7 Specified glyphosate Tolerant Cotton**

**Contact the seed manufacturer, seed distributor or seed supplier to determine if the seed variety is designated and supported as glyphosate tolerant.**

**TYPES OF APPLICATION:** Preplant; At-Planting; Preemergence; Postemergence (In-crop); Selective Equipment (In-crop); Preharvest

**USE INSTRUCTIONS:** Refer to the following table for maximum application rates of this product with specified glyphosate tolerant cotton.

Maximum Application Rates	
Combined total per year for all applications	6.0 quarts per acre
Total for all Preplant, At-Planting, Preemergence applications	3.8 quarts per acre
Total for all In-crop applications from cracking to layby	2.8 quarts per acre
Maximum Preharvest application rate	1.5 quarts per acre
Combined total for all In-crop applications from emergence through harvest	4.5 quarts per acre

See the "SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label for information regarding the use of this product in specified glyphosate tolerant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

**Preplant, At-Planting, Preemergence**

**USE INSTRUCTIONS:** This product may be applied before, during or after planting Glyphosate Tolerant cotton.

**TANK MIXTURES:** This product may be tank-mixed with 2,4-D or Clash and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. Ensure that the product used is labeled for application prior to the emergence of cotton. Read and follow label directions for all products in the tank mixture. Tank mixtures of Nufarm Credit 5.4 Herbicide with other products may impact crop tolerance and increase risk of crop injury.

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[acetochlor; clomazone; diuron; fluridone; flumioxazin; fluometuron; fomesafen; metolachlor; s-metolachlor; norflurazon; pendimethalin; prometryn; pyriithiobac-sodium; saflufenacil ]

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RESTRICTION:

- Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.8 quarts per acre per year.

**Postemergence (In-crop)**

USE INSTRUCTIONS: This product may be applied over the top of specified glyphosate tolerant cotton (in- crop) at rates of up to 24 fluid ounces per acre per application from cracking until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4 LEAF (NODE) STAGE OF DEVELOPMENT. SEQUENTIAL OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT IN-CROP MUST BE A MINIMUM OF 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. Over-the-top application made after the 4-leaf (node) stage of development could result in boll loss, delayed maturity and/or yield loss.

TANK MIXTURES: This product may be tank-mixed with the following products and applied over the top of specified glyphosate tolerant cotton up to the 4-leaf stage. Ensure that the product used is labeled for application postemergence (in- crop) to cotton. Read and follow label directions for all products in the tank mixture. Tank mixtures of Nufarm Credit 5.4 Herbicide with other products may impact crop tolerance and increase risk of crop injury.

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[acetochlor; clethodim; fluazifop-P-butyl; fomesafen; metolachlor; s-metolachlor; monosodium acid methanearsonate; pyriithobac-sodium; quizalofop-P-ethyl; sethoxydim; trifloxysulfuron-sodium]

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[*Optional text:* Staple could cause leaf yellowing and/or leaf crinkling when applied postemergence (in-crop) to glyphosate tolerant cotton. Dual MAGNUM and Stalwart applied over the top of Glyphosate Tolerant and specified glyphosate tolerant cotton could cause leaf injury in the form of necrotic spotting.]

**Salvage Treatment** – may be made after the 4-leaf stage of development and only when weeds threaten to cause the loss of the crop. Apply 24 fluid ounces of this product per acre either as an over-the-top application or as a post-directed application sprayed higher on the cotton plants and onto the weeds.

IN THE STATE OF ARIZONA ONLY, up to 36 fluid ounces of this product may be applied per acre either as an over-the-top application or a post-directed application for salvage treatment.

**NOTE:** SALVAGE TREATMENT WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT MAY BE MADE PER GROWING YEAR.

RESTRICTIONS:

- Maximum quantity of this product that may be applied for all in-crop applications from cracking to layby combined is 2.8 quarts per acre per year.
- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest of cotton.
- DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT (OTHER THAN THOSE CONTAINED IN ANY TANKMIX PRODUCT) FOR OVER-THE-TOP APPLICATION TO SPECIFIED GLYPHOSATE TOLERANT COTTON.

**Selective Equipment (In-crop)**

USE INSTRUCTIONS: This product may be applied using precision post-directed or hooded sprayers at rates of up to 24 fluid ounces per acre per application to specified glyphosate tolerant cotton through layby. At this crop stage, use post- directed application equipment to direct the spray towards the base of the cotton plants, avoiding contact of the herbicide spray with the leaves of the plant. To minimize contact, maintain a low spray pressure (less than 30 pounds per square inch) and place nozzles in a low position directing a horizontal spray pattern under the leaves of the cotton plant and onto the weeds in the row. For optimal results, apply this product while weeds are small (less than 3 inches in height). See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

TANK MIXTURES: This product may be tank-mixed with the following products for in-crop application using precision post-directed or hooded sprayers. Ensure that the product used is labeled for application postemergence (in-crop) to cotton. Read and follow label directions for all products in the tank mixture. Tank mixtures of Nufarm Credit 5.4 Herbicide with other products may impact crop tolerance and increase risk of crop injury.

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[carfentrazone-ethyl; diuron; flumioxazin; fluometuron; linuron; metolachlor; monosodium acid methanearsonate; pendimethalin; prometryn; pyriithiobac-sodium; trifloxysulfuron-sodium ]

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[*Optional text:* Staple could cause leaf yellowing and/or leaf crinkling when applied postemergence (in-crop) to specified glyphosate tolerant cotton.]

#### RESTRICTIONS:

- Maximum quantity of this product that may be applied for all in-crop applications from cracking to layby combined is 2.8 quarts per acre per year.
- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest of cotton.
- NO MORE THAN TWO APPLICATIONS OF THIS PRODUCT MAY BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL OVER-THE-TOP OR POSTDIRECTED IN-CROP APPLICATIONS OF THIS PRODUCT MUST BE A MINIMUM OF 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS.

#### Preharvest

USE INSTRUCTIONS: Up to 48 fluid ounces of this product per acre may be applied after 20 percent boll crack for annual and perennial weed control prior to crop harvest.

**NOTE:** This product will not enhance the performance of harvest aids when applied to specified glyphosate tolerant cotton.

#### PRECAUTIONS:

- Do not apply this product for preharvest weed control to cotton grown for seed, as a reduction in germination or vigor could occur.
- To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the preharvest use of this product on specified glyphosate tolerant cotton grown for seed.

#### RESTRICTIONS:

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest of cotton.
- DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR PREHARVEST APPLICATION TO SPECIFIED GLYPHOSATE TOLERANT COTTON.

**ATTENTION:** USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF SPECIFIED GLYPHOSATE TOLERANT COTTON. HOWEVER, DUE TO THE SENSITIVITY OF COTTON FRUITING TO VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS, IT IS IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN ACCORDANCE WITH THE LABEL DIRECTIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

#### 11.8 Glyphosate Tolerant Flex Cotton

**The directions for use of this product provided in this section are specific to and may only be used with varieties designated as Glyphosate Tolerant Flex cotton.** Applications described in this section made over the top of cotton other than Glyphosate Tolerant Flex cotton will cause crop injury and reduced yields. DO NOT combine the directions for use in this section with those in the "Glyphosate Tolerant Cotton" section of this label, or with any other directions for use on Glyphosate Tolerant cotton or Glyphosate Tolerant Flex cotton on

labeling for this or any specified glyphosate-containing product. Drift of this product from an application made to Glyphosate Tolerant Flex cotton onto adjacent fields of post 4-leaf (node) *Glyphosate Tolerant cotton* could cause extensive crop injury, including boll loss, delayed maturity and/or yield loss.

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop); Preharvest

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Glyphosate Tolerant Flex cotton.

Maximum Application Rates	
Combined total per year for all applications	6 quarts per acre
Total for all Preplant, At-Planting, Preemergence applications	3.8 quarts per acre
Total for all In-crop applications from cracking to 60 percent open bolls	4.5 quarts per acre
Total for all In-crop applications between layby and 60 percent open bolls	1.5 quarts per acre
Total for all In-crop applications from 60 percent open bolls to 7 days prior to harvest	1.5 quarts per acre
Total for all In-crop applications from emergence through harvest	4.5 quarts per acre

See the "GLYPHOSATE TOLERANT AND SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label for information regarding the use of this product in Glyphosate Tolerant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

#### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Glyphosate Tolerant Flex cotton.

TANK MIXTURES: This product may be tank-mixed with 2,4-D or Clash and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. Ensure that the product used is labeled for application prior to emergence of cotton. Read and follow label directions for all products in the tank mixture.

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[acetochlor; clomazone; diuron; fluridone; flumioxazin; fluometuron; fomesafen; metolachlor; s-metolachlor; norflurozon; pendimethalin; prometryn; pyriithobac-sodium; saflufenacil ]

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#### RESTRICTION:

- Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.8 quarts per acre per year.

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied to control annual grasses and broadleaf weeds listed on this label in Glyphosate Tolerant Flex cotton. To maximize yield potential, eliminate competing weeds early. Many perennial weeds will be controlled or suppressed with one or more applications of this product. Use an initial application rate of 24 fluid ounces per acre to control or suppress 1 to 3 inch tall annual grasses and broadleaf weeds. This product may be applied postemergence to Glyphosate Tolerant Flex cotton using ground application equipment at rates up to 36 fluid ounces per acre per application. In addition to broadcast application, post-directed spray equipment may be used to achieve more thorough weed coverage.

IN THE STATES OF ARIZONA, NEW MEXICO AND TEXAS (WEST OF I-35) ONLY, up to 48 fluid ounces of this product per acre may be applied per postemergence application using ground application equipment.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of Glyphosate Tolerant Flex cotton.

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[acetochlor; clethodim; fluazifop-P-butyl; fomesafen; metolachlor; s-metolachlor; monosodium acid methanearsonate; pyriithobac-sodium; quizalofop-p-ethyl; sethoxydim; trifloxysulfuron-sodium ]

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[Optional text: Staple could cause leaf yellowing and/or leaf crinkling when applied postemergence (in-crop) in Glyphosate Tolerant Flex cotton. Dual MAGNUM and Stalwart applied over the top of Glyphosate Tolerant Flex cotton could cause leaf injury in the form of necrotic spotting.]

This product may be tank-mixed with the following products for in-crop application using precision post-directed or hooded sprayers.

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[carfentrazone-ethyl; diuron; flumioxazin; fluometuron; linuron; metolachlor; monosodium acid methanearsonate; pendimethalin; prometryn; pyriithiobac-sodium; trifloxysulfuron-sodium ]

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[Optional text: Staple could cause leaf yellowing and/or leaf crinkling when applied postemergence (in-crop) in Glyphosate Tolerant Flex cotton.]

Ensure that the product used is labeled for application postemergence (in-crop) to cotton. Read and follow label directions for all products in the tank mixture.

**RESTRICTIONS:**

- The maximum single, in-crop application rate of this product to Glyphosate Tolerant Flex cotton using ground application equipment is 36 fluid ounces per acre, except in Arizona, New Mexico and west Texas (west of I-35 only), where up to 48 fluid ounces per acre may be applied in a single application using ground application equipment.
- **In-crop application rates above 24 fluid ounces per acre made alone or with the addition of other crop chemical products containing surfactant could cause a crop response including leaf speckling or leaf necrosis.** Do not exceed a maximum single, in-crop application rate of 24 fluid ounces of this product per acre when using aerial application equipment, except in Arizona, New Mexico and west Texas (west of I-35 only), where up to 36 fluid ounces may be applied as a single application using aerial application equipment.
- Between layby and 60 percent open bolls, the maximum combined total application rate of this product is 1.5 quarts per acre.
- The combined total for all applications of this product made from crop emergence to 60 percent open bolls must not exceed 4.5 quarts per acre.
- **DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR OVER-THE-TOP APPLICATION TO GLYPHOSATE TOLERANT FLEX COTTON.**

**Preharvest**

USE INSTRUCTIONS: Up to 1.5 quarts of this product per acre may be applied to Glyphosate Tolerant Flex cotton for annual and perennial weed control prior to harvest after 60 percent boll crack.

**NOTE:** This product will not enhance the performance of harvest aids when applied to Glyphosate Tolerant Flex cotton.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): Allow a minimum of 7 days between application and harvest of Glyphosate Tolerant Flex cotton.
- **DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR PREHARVEST APPLICATION TO GLYPHOSATE TOLERANT FLEX COTTON.**

**ATTENTION:** USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF GLYPHOSATE TOLERANT FLEX COTTON. HOWEVER, DUE TO THE SENSITIVITY OF COTTON FRUITING TO VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS, IT IS IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN ACCORDANCE WITH THE LABEL DIRECTIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

**11.9 Glyphosate Tolerant and Specified glyphosate Tolerant Soybean**

**Contact the seed manufacturer, seed distributor or seed supplier to determine if the seed variety is designated and supported as glyphosate tolerant.**

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop); Preharvest; Post-Harvest

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with specified glyphosate tolerant soybean.

Maximum Application Rates	
Combined total per year for all applications	6 quarts per acre
Total for all Preplant, At-Planting, Preemergence applications	3.8 quarts per acre
Total for all In-crop applications from cracking through flowering (R2 stage soybean)	72 fluid ounces per acre
Maximum Preharvest application rate	24 fluid ounces per acre

See the “ SPECIFIED GLYPHOSATE TOLERANT CROPS” section of this label for information regarding the use of this product in specified glyphosate tolerant crops. See the “PRODUCT INFORMATION” section of this label for more information on Maximum Application Rates.

#### **Preplant, At-Planting, Preemergence**

USE INSTRUCTIONS: This product may be applied before, during or after planting specified glyphosate tolerant soybean.

TANK MIXTURES: This product may be tank-mixed with 2,4-D, Diablo or Clash and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. Ensure that the product used is labeled for application prior to emergence of soybean. Read and follow label directions for all products in the tank mixture. Tank mixtures of Nufarm Credit 5.4 Herbicide with other products may impact crop tolerance and increase risk of crop injury.

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[acetochlor; alachlor; carfentrazone-ethyl; chlorimuron ethyl; clethodim; clomazone; cloransulammethyl; dimethenamid; dimethenamid-p; fluazifop-p-butyl; flufenacet; flumiclorac pentyl ester; flumioxazin; fluthiacet-methyl; fomesafen; imazaquin; imazethapyr; lactofen; linuron; metolachlor; s-metolachlor; metribuzin; pendimethalin; pyroxasulfone; quizalofop P-ethyl; saflufenacil; sulfentrazone; tribenuron methyl; trifluralin ]

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#### **RESTRICTION:**

- Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.8 quarts per acre per year.

#### **Postemergence (In-crop)**

USE INSTRUCTIONS: This product may be used to control annual grasses and broadleaf weeds in specified glyphosate tolerant soybean from emergence (cracking) through flowering (R2 stage soybean). R2 stage soybean ends when a pod 5 millimeters (3/16 inch) long appears at one of the four uppermost nodes on the main stem with a fully developed leaf (R3 stage). Refer to the “ANNUAL WEEDS RATE SECTION” of this label for application rates for specific annual weeds. An initial application of 24 fluid ounces of this product per acre will control or suppress most 2-to 8-inch tall weeds, which are normally found approximately 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. This product may be applied up to 48 fluid ounces per acre as a single, in-crop application for control of annual weeds and where dense weed populations exist.

Application of 24 to 48 fluid ounces of this product per acre (single or multiple applications) will control or suppress perennial weeds, including bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, maretail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed and wirestem muhly. For optimal results, allow perennial weed species to achieve at least 6 inches of growth before applying this product.

Under adverse growing conditions, including drought, hail or wind damage, or a poor soybean stand that slows or delays canopy closure, a sequential application of this product might be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE NEEDED TO CONTROL NEW FLUSHES OF WEEDS IN THE SPECIFIED GLYPHOSATE TOLERANT SOYBEAN CROP. To control giant ragweed, apply 24 fluid ounces of this product per acre when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of specified glyphosate tolerant soybean. Ensure that the product used is labeled for application postemergence (in-crop) to soybean. Read and follow label directions for all products in the tank mixture. Tank mixtures of Nufarm Credit 5.4 Herbicide with other products may impact crop tolerance and increase risk of crop injury.

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[acetochlor; acifluorfen; bentazon; chlorimuron ethyl; clethodim; cloransulam-methyl; fenoxaprop-P-ethyl; fluazifop-p-butyl; flumiclorac pentyl ester; fluthiacet-methyl; fomesafen; imazamox; imazethapyr; lactofen; pendimethalin; quizalofop P-ethyl; sethoxydim; thifensulfuron-methyl ]

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**PRECAUTION:**

- In some cases, these tank-mix products will cause visual soybean injury.

**RESTRICTIONS:**

- The combined total application of this product from crop emergence through harvest must not exceed 72 fluid ounces per acre.
- The maximum rate for any single in-crop application is 48 fluid ounces per acre.
- The maximum combined total amount of this product that may be applied during flowering (R2 stage soybean) is 48 fluid ounces per acre.

**Preharvest**

USE INSTRUCTIONS: Apply up to 24 fluid ounces of this product per acre to specified glyphosate tolerant soybean for weed control prior to harvest after pods have set and lost all green color. Take care to avoid excessive seed shatter loss due to ground application equipment.

**RESTRICTION:**

- Pre-harvest interval (PHI): Allow a minimum of 14 days between application and harvest of soybean grain or feeding of soybean grain, forage or hay.

**Post-Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after harvest of specified glyphosate tolerant soybean. Higher rates might be needed for control of large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for weed control application after harvest of soybean. Read and follow label directions for all products in the tank mixture.

**RESTRICTION:**

- Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

**11.10 Glyphosate Tolerant 2 Yield Soybean**

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop); Preharvest; Post-Harvest

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Glyphosate Tolerant 2 Yield soybean.

Maximum Application Rates	
Combined total per year for all applications	6 quarts per acre
Total for all Preplant, At-Planting, Preemergence applications	3.8 quarts per acre
Total for all In-crop applications from cracking through flowering (R2 stage soybean)	72 fluid ounces per acre
Maximum Preharvest application rate	24 fluid ounces per acre



See the "SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label for information regarding the use of this product in Glyphosate Tolerant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

### **Preplant, At-Planting, Preemergence**

USE INSTRUCTIONS: This product may be applied before, during or after planting Glyphosate Tolerant 2 Yield soybean.

TANK MIXTURES: This product may be tank-mixed with 2,4-D, Diablo or Clash and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. Ensure that the product used is labeled for application prior to emergence of soybean. Read and follow label directions for all products in the tank mixture.

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[acetochlor; alachlor; carfentrazone-ethyl; chlorimuron ethyl; clethodim; clomazone; cloransulammethyl; dimethenamid; dimethenamid-p; fluazifop-p-butyl; flufenacet; flumiclorac pentyl ester; flumioxazin; fluthiacet-methyl; fomesafen; imazaquin; imazethapyr; lactofen; linuron; metolachlor; s-metolachlor; metribuzin; pendimethalin; pyroxasulfone; quizalofop P-ethyl; saflufenacil; sulfentrazone; tribenuron methyl; trifluralin ]

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### **RESTRICTION:**

- Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.8 quarts per acre per year.

### **Postemergence (In-crop)**

USE INSTRUCTIONS: This product may be used to control annual grasses and broadleaf weeds in Glyphosate Tolerant 2 Yield soybean from emergence (cracking) through flowering (R2 stage soybean). R2 stage soybean ends when a pod 5 millimeters (3/16 inch) long appears at one of the four uppermost nodes on the main stem with a fully developed leaf (R3 stage). Refer to the "ANNUAL WEEDS RATE SECTION" of this label for application rates for specific annual weeds. An initial application of 24 fluid ounces of this product per acre will control or suppress most 2- to 8-inch tall weeds, which are normally found approximately 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. This product may be applied up to 48 fluid ounces per acre as a single, in-crop application for control of annual weeds and where dense weed populations exist.

Application of 24 to 48 fluid ounce of this product per acre (single or multiple applications) will control or suppress perennial weeds, including bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, maretail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed and wirestem muhly. For optimal results, allow perennial weed species to achieve at least 6 inches of growth before applying this product.

Under adverse growing conditions, including drought, hail or wind damage, or a poor soybean stand that slows or delays canopy closure, a sequential application of this product might be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE NEEDED TO CONTROL NEW FLUSHES OF WEEDS IN THE GLYPHOSATE TOLERANT 2 YIELD SOYBEAN CROP. To control giant ragweed, apply 24 fluid ounces of this product per acre when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of Glyphosate Tolerant 2 Yield soybean. Ensure that the product used is labeled for application postemergence (in-crop) to soybean. Read and follow label directions for all products in the tank mixture.

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[acetochlor; acifluorfen; bentazon; chlorimuron ethyl; clethodim; cloransulam-methyl; fenoxaprop-ethyl; fluazifop-p-butyl; flumiclorac pentyl ester; fluthiacet-methyl; fomesafen; imazamox; imazethapyr; lactofen; pendimethalin; quizalofop P-ethyl; sethoxydim; thifensulfuron-methyl ]

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**PRECAUTION:**

- In some cases, these tank-mix products will cause visual soybean injury.

**RESTRICTIONS:**

- The combined total application of this product from crop emergence through harvest must not exceed 72 fluid ounces per acre.
- The maximum rate for any single in-crop application is 48 fluid ounces per acre.
- The maximum combined total amount of this product that may be applied during flowering (R2 stage soybean) is 48 fluid ounces per acre.

**Preharvest**

USE INSTRUCTIONS: Up to 24 fluid ounces of this product per acre may be applied to Glyphosate Tolerant 2 Yield soybean for weed control prior to harvest after pods have set and lost all green color. Take care to avoid excessive seed shatter loss due to ground application equipment.

**RESTRICTION:**

- Pre-harvest interval (PHI): Allow a minimum of 14 days between application and harvest of soybean grain or feeding of soybean grain, forage or hay.

**Post-Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after harvest of Glyphosate Tolerant 2 Yield soybean. Higher rates might be needed for control of large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for weed control application after harvest of soybean. Read and follow label directions for all products in the tank mixture.

**RESTRICTION:**

- Application of this product must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

**11.11 Glyphosate Tolerant Sugarbeet**

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop)

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Glyphosate Tolerant sugarbeet.

Maximum Application Rates	
Combined total per year for all applications	6 quarts per acre
Total for all Preplant, At-Planting, Preemergence applications	3.8 quarts per acre
Maximum single application rate from emergence to 8-leaf stage	36 fluid ounces per acre
Total for all applications made from emergence to 8-leaf stage	63 fluid ounces per acre
Maximum single application rate between 8-leaf stage and canopy closure	24 fluid ounces per acre
Total for all applications made between 8-leaf stage and canopy closure	48 fluid ounces per acre

See the "SPECIFIED GLYPHOSATE TOLERANT CROPS" section of this label for information regarding the use of this product in Glyphosate Tolerant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Glyphosate Tolerant sugarbeet.

TANK MIXTURES: This product may be tank-mixed with the following products and applied prior to crop emergence. Ensure that the product used is labeled for application prior to emergence of sugarbeet. Read and follow label directions for all products in the tank mixture.

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[ethofumesate ]

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#### RESTRICTION:

- Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.8 quarts per acre per year.

### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied over the top of Glyphosate Tolerant sugarbeet for control of annual grasses and broadleaf weeds from emergence to 30 days prior to harvest. To maximize yield potential, eliminate competing weeds early. Up to 4 applications of this product may be made with a minimum of 10 days between each application. This product will control or suppress most perennial weeds. For some perennial weeds, more than one application might be needed to eliminate crop competition throughout the year. Refer to the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" in this label for application rates for specific weeds.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of Glyphosate Tolerant sugarbeet. Ensure that the product used is labeled for application postemergence (in-crop) to sugarbeet. Read and follow label directions for all products in the tank mixture.

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[clethodim; clopyralid; desmedipham; dimethenamid-P; ethofumesate; s-metolachlor; phenmedipham; quizalofop-p-ethyl; trisulfuron-methyl ]

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[Assure II; Betamix; Betanex; Dual MAGNUM; Norton SC; Outlook; Progress; Select; Stinger; Upbeet]

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[*Optional statement:* Betamix, Betanex, Norton SC and Progress can cause significant sugarbeet injury. Refer to these product labels for crop injury precautions.]

#### RESTRICTIONS:

- The combined total application of this product from crop emergence through harvest must not exceed 3.5 quarts per acre.
- The maximum rate for any single application from crop emergence until the 8-leaf stage is 36 fluid ounces per acre.
- The maximum rate for any single application between the 8-leaf stage and canopy closure is 24 fluid ounces per acre.
- Pre-harvest interval (PHI): Allow a minimum of 30 days between application and sugarbeet harvest.

## 12.0 FARMSTEAD USE

TYPES OF USES: Farmstead Weed Control; Trim-and-Edge; Greenhouse/Shadehouse; Chemical Mowing; Cut Stump Application; Habitat Management

USE INSTRUCTIONS: Refer to the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label for application rates for specific weeds. When applied as directed, this product will control those annual and perennial grasses and broadleaf weeds. Application rates of this product specified in the following sections, or on separate supplemental labeling or Fact Sheets published for this product, for hard-to-control weeds supersede rates in the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label.

### 12.1 Farmstead Weed Control, Trim-and-Edge

USE INSTRUCTIONS: This product may be used to control annual and perennial weeds, woody brush, trees and vines found on any

part of the farmstead, including around building foundations and equipment storage areas, along and in fences, in dry ditches and canals, along ditch banks, driveways, farm roads, farmyards, fencerows, parking areas, rangeland, rights-of-way, shelterbelts, storage areas and prior to planting landscape ornamentals.

**TANK MIXTURES:** This product may be tank-mixed with the following products, provided that the product used is labeled for these sites and uses. Refer to each individual product label for approved sites and application rates. Read and follow label directions for all products in the tank mixture.

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[2,4-D; bromacil; chlorosulfuron; dicamba; diuron; imazapic; imazapyr; metsulfuron-methyl; oryzalin; oxadiazon; pendimethalin; prodiamine; simazine; sulfometuron-methyl ]

For annual weeds, apply 24 fluid ounces of this product per acre when weeds are less than 6 inches tall, 36 fluid ounces when weeds are 6 to 12 inches tall and 48 fluid ounces when weeds are greater than 12 inches tall. For perennial weeds, apply 48 fluid ounces to 3.8 quarts per acre in a tank-mix with one of the products listed here. For application of tank mixtures using a backpack sprayer, handgun or other handheld applicator, see the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label for the required concentration of this product in the mix.

## **12.2 Greenhouse/Shadehouse**

**USE INSTRUCTIONS:** This product may be used to control weeds in and around greenhouses and shadehouses.

**PRECAUTION:**

- Remove desirable vegetation before applying this product inside a greenhouse or shadehouse.

**RESTRICTIONS:**

- Turn air circulation fans off before applying this product inside a greenhouse or shadehouse and until the application solution has dried.
- Do not use inside residential greenhouses.

## **12.3 Chemical Mowing**

**USE INSTRUCTIONS:** This product may be used to suppress growth of perennial grasses listed in this section along farm ditches and on any other part of the farmstead to serve as a substitute for mowing. Apply 4.5 fluid ounces of this product per acre to suppress Kentucky bluegrass, tall fescue, fine fescue, orchardgrass, bahiagrass or quackgrass covers; 12 fluid ounces to suppress bermudagrass; or 48 fluid ounces to suppress torpedograss or para grass. Make all applications in 10 to 20 gallons of spray solution per acre.

**PRECAUTION:**

- Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

## **12.4 Cut Stump Application**

**TYPES OF USES:** Treating brush and tree stumps on any terrestrial site

**USE INSTRUCTIONS:** This product may be used to control re-growth and re-sprouting of many species of woody brush and trees. Cut the woody brush or tree close to the soil surface and immediately apply a 50- to 100-percent (undiluted) solution of this product to the freshly cut surface using application equipment capable of covering the entire cambium. A delay in application could result in reduced performance. For optimal results, cut the woody brush or tree during period of active growth and full leaf expansion and apply this product. Some of the species controlled by this method of application of this product are:

Alder	Oak	Reed, giant	Tan oak
Eucalyptus	Pepper, Brazilian	Saltcedar	Willow
Madrone	Pine, Austrian	Sweetgum	

**PRECAUTION:**

- Do not make a cut stump application when the roots of desirable woody brush or trees might be grafted to the roots of the cut stump. Some sprouts, stems, or trees can share a common root system. Adjacent trees having a similar age, height and spacing could be an indicator of a shared root system. Whether grafted or shared, injury is likely to occur to adjacent stems or trees when this product is applied to one or more trees sharing a common root system.

## 12.5 Habitat Management

TYPES OF USES: Habitat Restoration and Maintenance; Wildlife Food Plots

### Habitat Restoration and Maintenance

USE INSTRUCTIONS: This product may be used to control exotic and other undesirable vegetation in habitat management areas. Application may be made to allow recovery of native plant species or prior to planting desirable native species, and for similar broad-spectrum vegetation control in habitat management areas. Spot treatment may be used to selectively remove unwanted plants for habitat maintenance and enhancement.

### Wildlife Food Plots

USE INSTRUCTIONS: This product may be used to eliminate annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait a minimum of 7 days after application before tilling.

**RESTRICTION:**

- Plant back interval (PBI): There are no rotational restrictions for planting any wildlife food species or for allowing native species to repopulate the area following application of this product.

## 13.0 ANNUAL WEEDS RATE SECTION

When water carrier volumes are between 16 and 40 gallons per acre for ground application, and between 6 and 15 gallons per acre for aerial application, the following use rates will control the annual weeds listed in the "ANNUAL WEEDS RATE TABLE" that follows:

- 24 fluid ounces per acre – grass and broadleaf annual weeds less than 6 inches in height or circumference, and vines less than 3 inches in length.

- 36 fluid ounces per acre – grass and broadleaf annual weeds 6 to 12 inches in height or circumference, and vines 3 to 6 inches in length.

- 48 fluid ounces per acre – grass and broadleaf annual weeds greater than 12 inches in height or circumference, and vines greater than 6 inches in length.

**WHEN WATER CARRIER VOLUMES ARE BETWEEN 3 AND 15 GALLONS PER ACRE FOR GROUND APPLICATION, AND BETWEEN 3 AND 5 GALLONS PER ACRE FOR AERIAL APPLICATION, USE THE RATES SPECIFIED FOR INDIVIDUAL WEEDS INDICATED IN THE "ANNUAL WEEDS RATE TABLE."**

Apply to actively growing annual weeds.

Annual weeds are often easiest to control when they are small. Control of older, mature (hardened) or otherwise hard-to-control annual weed species could require higher application rates than specified in this table, even if they meet the size requirements listed. This product may be applied at rates of up to 48 fluid ounces per acre for hard-to-control annual weeds and where dense weed populations exist. Follow all precautions and restrictions, including maximum application rates and crop stage timings specified in the directions for use on specific crops, including Glyphosate Tolerant crops, and use sites listed on this label.

Maximum size refers to the maximum plant height, length of runners for vines or circumference of rosette plants in inches.

Do not tank-mix this product with soil residual herbicides when applying at these rates, unless otherwise directed.

For control of annual weeds using a handheld controlled droplet applicator (CDA), apply a 20-percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 miles per hour (1.5 pints per acre). When using a vehicle-mounted CDA, apply the required amount of this product, as indicated in the following rate table, in 2 to 15 gallons of water per acre.

For weeds that have been mowed, grazed or cut, allow re-growth to occur prior to application of this product.

**ANNUAL WEED RATE TABLE**

Weed Species	Broadcast Application Rates (fluid ounces per acre)				
	12	18	24	30	36
	Maximum Height/Length (inches)				
Ammannia, purple	3	6	12	-	18
Anoda, spurred	-	2	3	5	8
Barley	18	18+	-	-	-
Barnyardgrass	-	3	6	7	9
Bassia, fivehook	-	-	6	-	-
Beggarweed, Florida	-	5	8	-	-
Bittercress	12	20	-	-	-
Bluegrass, annual	10	-	-	-	-
Bluegrass, bulbous	6	-	-	-	-
Brome, downy <sup>1,2</sup>	6	12	-	-	-
Brome, Japanese	6	12	24	-	-
Browntop panicum	6	8	12	-	24
Buckwheat, wild <sup>3</sup>	-	1	2	-	-
Burcucumber	-	6	12	-	18
Buttercup	12	20	-	-	-
Carolina geranium	-	-	4	-	9
Carpetweed	-	6	12	-	-
Cheat <sup>2</sup>	6	20	-	-	-
Chervil	20	-	-	-	-
Chickweed	-	12	18	-	-
Cocklebur	12	18	24	-	36
Copperleaf, hophornbeam	-	2	4	-	6
Copperleaf, Virginia	-	2	4	-	6
Coreopsis, plains	-	6	12	-	18
Corn, volunteer	6	12	20	-	-
Corn speedwell	12	-	-	-	-
Crabgrass	3	6	12	-	-
Crowfootgrass	-	-	6	-	12
Cutleaf evening primrose	-	-	3	-	6
Devil's claw (unicorn plant)	-	3	6	-	-
Dwarf dandelion	12	-	-	-	-
Eastern mannagrass	8	12	-	-	-
Eclipta	-	4	8	12	-
Fall panicum	4	-	6	-	12
Falsedandelion	-	20	-	-	-
Falseflax, smallseed	12	-	-	-	-
Fiddleneck	-	6	12	-	-
Field pennycress	6	12	-	-	-
Filaree	-	-	6	-	10
Fleabane, annual	6	20	-	-	-
Fleabane, hairy* (Conyza bonariensis)	-	-	6	-	10
Fleabane, rough	3	6	12	-	-
Florida pusley	-	-	4	-	6
Foxtail; giant, bristly, yellow	6	12	20	-	-
Foxtail, Carolina	10	-	-	-	-
Foxtail, green	12	-	-	-	-
Goatgrass, jointed	6	12	-	-	-
Goosegrass	-	3	6	-	12
Grain sorghum (milo)	6	12	20	-	-
Groundcherry	-	3	6	-	9
Groundsel; common, cressleaf	-	6	10	-	-
Hemp sesbania	-	2	4	6	8
Henbit	-	-	6	-	12
Horseweed/ Maretail* (Conyza canadensis)	-	6	12	-	18
Itchgrass	6	8	12	-	18

Jimsonweed	-	-	12	-	18
Johnsongrass, seedling*	6	12	18	-	24
Junglerice	-	3	6	7	9
Knotweed	-	-	6	-	12
Kochia* <sup>4</sup>	-	3 to 6	12	-	-
Lambsquarters	-	6	12	-	20
Little barley	6	12	-	-	-
London rocket	6	-	24	-	-
Mayweed	-	2	6	12	18
Morning glory, annual (Ipomoea spp.)	-	-	3	-	6
Mustard; blue, tansy, tumble, wild	6	12	18	-	-
Nightshade; black, hairy	-	4	6	-	12
Oats	3	6	18	-	-
Pigweed, Palmer*	-	12	18	24	-
Pigweed species*	-	12	18	24	-
Prickly lettuce	-	6	12	-	-
Purslane	-	-	3	-	6
Ragweed, common,* giant*	-	6	12	-	18
Red rice	-	-	4	-	-
Rye, volunteer/cereal <sup>2</sup>	6	18	18+	-	-
Ryegrass species*	-	-	6	-	12
Sandbur, field	6	12	-	-	-
Sandbur, longspine	6	12	-	-	-
Shattercane	6	12	20	-	-
Shepherd's-purse	6	12	-	-	-
Sicklepod	-	2	4	-	8
Signalgrass, broadleaf	-	3	6	7	9
Smartweed, ladysthumb	-	-	6	-	9
Smartweed, Pennsylvania	-	-	6	-	9
Sowthistle, annual	-	-	6	-	12
Spanishneedles	-	-	6	-	12
Speedwell, purslane	12	-	-	-	-
Sprangletop	6	12	20	-	-
Spurge; prostrate, spotted	-	6	12	-	-
Spurry, umbrella	6	-	-	-	-
Stinkgrass	-	12	-	-	-
Sunflower	12	18	-	-	-
Swinecress	-	5	12	-	-
Teaweed/ Prickly sida	-	2	4	-	6
Texas panicum	6	8	12	-	24
Thistle, Russian <sup>5</sup>	-	6	12	-	24
Velvetleaf	-	-	6	-	12
Virginia pepperweed	-	18	-	-	-
Waterhemp*	-	-	6	-	12
Wheat <sup>2</sup>	6	12	18	-	-
Wheat (overwintered)	-	6	12	-	18
Wild oats	3	6	18	-	-
Wild proso millet	-	6	12	-	18
Witchgrass	-	12	-	-	-
Woolly cupgrass	-	6	12	-	-
Yellow rocket	-	12	20	-	-

<sup>1</sup> For control of downy brome in no-till systems, apply 18 fluid ounces of this product per acre.

<sup>2</sup> Performance of this product can be optimized if application is made before this weed reaches the boot stage of growth.

<sup>3</sup> Apply 18 fluid ounces of this product per acre to control wild buckwheat in the cotyledon to 2-leaf stage. Apply 24 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For optimal control of wild buckwheat over 2 inches in size, make sequential applications of 24 fluid ounces followed by 24 fluid ounces of this product per acre.

<sup>4</sup> Do not apply when kochia is in the button stage.

<sup>5</sup> Control of Russian thistle can vary based on environmental conditions and spray coverage. If possible, apply this product in a tank mixture with 2,4-D, as described in the following section, to improve control.

\* A Glyphosate-resistant biotype has been confirmed. For additional information, refer to the "WEED RESISTANCE MANAGEMENT" section of this label. You can also visit via the Internet, [www.weedscience.org](http://www.weedscience.org), or contact your Nufarm representative.



### **13.1 Annual Weeds- Tank Mixtures with 2,4-D, Dicamba or Trooper 22K**

Optimal control of certain hard-to-control weeds can be achieved by tank-mixing this product with dicamba, 2,4-D, or Trooper 22K. An appropriate rate of these other herbicides, combined with the rate of this product specified in the "ANNUAL WEEDS RATE TABLE," will control the following weeds up to the maximum height or length indicated: 6 inches-prickly lettuce, maretail/horseweed, morning glory, kochia (in a tank-mix with dicamba only) wild buckwheat (in a tank-mix with Trooper 22K only); 12 inches-cocklebur, lambsquarters, pigweed, Russian thistle (in a tank-mix with 2,4-D only).

At application rates listed in the "ANNUAL WEEDS RATE SECTION," this product will control the following weeds up to a maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf. For optimal control, tank-mix this product with 0.5 pound of 2,4-D per acre.

Ensure that the product used is labeled for application at the desired site. Follow all precautions and limitations on the tank-mix product label, including application timing restrictions, soil restrictions, minimum re-cropping intervals and crop rotation restrictions. Use according to the more restrictive label requirements. Some crop injury could occur if dicamba or Tordon 22K is applied within 45 days of planting.

### **13.2 Annual Weeds- Handheld Sprayers**

For control of weeds listed in the "ANNUAL WEEDS RATE TABLE," apply a 0.5-percent solution of this product to weeds less than 6 inches in height or runner length prior to seedhead formation in grasses or bud formation in broadleaf weeds. For control of annual weeds over 6 inches tall, or unless otherwise directed, use a 0.8-percent solution.

For optimal results on hard-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle, apply a 1.7-percent solution of this product.

When using application methods that result in less than complete coverage, apply a 5-percent solution of this product for control of annual and perennial weeds, and a 5- to 8-percent solution for control of woody brush, trees and vines.

### **13.3 Annual Weeds- Tank Mixtures for Fallow and Reduced Tillage Systems**

For use only in Colorado, Kansas, Nebraska, Oklahoma, Oregon, South Dakota and Washington. In Oregon and Washington, do not exceed 1 pound of atrazine per acre.

Application of 18 to 23 fluid ounces of this product per acre, in a tank mixture with atrazine, per acre will control the following weeds: downy brome, green foxtail, lambsquarters, prickly lettuce, tansy mustard, pigweed, field sandbur, stinkgrass, Russian thistle, volunteer wheat and Witchgrass in a tank mix with atrazine and dicamba. Barnyardgrass and kochia require 23 fluid ounces of this product per acre for control in a tank mix with atrazine and dicamba. Ensure that the atrazine and dicamba products are labeled for the intended use and application site. Follow all precautions and limitations on the tank-mix product label, including any application timing restrictions, soil restrictions, minimum re-cropping intervals and crop rotation restrictions.

## **14.0 PERENNIAL WEEDS RATE SECTION**

Apply this product to actively growing perennial weeds. New leaf development indicates active growth. Optimal results can be obtained when soil moisture is adequate for active weed growth.

If weeds have been recently mowed or tilled, do not apply this product until plants have resumed active growth and have reached the specified stage of growth or sufficient growth has been achieved to allow for good interception of the spray solution. For optimal control, do not mow, cut, till, burn or disturb vegetation in the application area for a minimum of 7 days after application.

For control of perennial weeds using a handheld controlled droplet applicator (CDA), apply a 20- to 40 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mile per hour (3 to 6 pints per acre). When using a vehicle-mounted CDA, apply the required amount of this product, as indicated in the following rate table, in 2 to 15 gallons of water per acre. This product has no soil activity and does not control emergence of perennial weeds from seed and dormant underground roots, rhizomes or tubers present in the soil at the time of application. More than one application of this product might be necessary to control weeds regenerating from underground parts or seed, but must be made prior to crop emergence, except where in-crop application is allowed.

Application of this product in the fall must be made before a killing frost.

Unless otherwise directed, allow a minimum of 7 days after application before soil tillage.

**PERENNIAL WEEDS RATE TABLE**

<b>Weed Species</b>	<b>Broadcast Rate (quarts/acre)</b>	<b>Water Volume (gallons/acre)</b>	<b>Handheld Sprayer Concentration (%Solution)</b>
<b>Alfalfa</b> Apply after last hay cutting in the fall and alfalfa has re-grown to a height of 6 to 8 inches or more. Follow with deep tillage after a minimum of 7 days after application, but before soil freeze-up.	1 – 1.7	3 – 10	1.5%
<b>Alligatorweed</b> For partial control, apply this product when most target plants are in bloom. More than one application will be needed to achieve control.	3.5	3 – 20	1.25%
<b>Anise (fennel) <sup>1</sup></b>	-	-	1 – 1.5%
<b>Bahiagrass <sup>2</sup></b>	2.3 – 3.8	3 – 20	1.5%
<b>Bentgrass</b> For suppression in grass seed production areas using ground application equipment only. Ensure entire crown area has resumed growth prior to application in the fall. Ensure that bentgrass has at least 3 inches of growth before application. Avoid tillage prior to application. Tillage 7 to 10 days after application provides optimal results.	1.1	10 – 20	1.5%
<b>Bermudagrass</b> For control, apply 3.8 quarts of this product per acre when bermudagrass is actively growing and seedheads are present. More than one application might be necessary to achieve control. For partial control, apply 72 fluid ounces per acre.	2.3 – 3.8	3 – 20	1.5%
<b>Bermudagrass, water (knotgrass)</b> Apply 36 fluid ounces of this product in 5 to 10 gallons of water per acre when water bermudagrass is 12 to 18 inches in length. Allow a minimum of 7 days after application before tilling, flushing or flooding the field. For fall application, till fallow fields and apply 24 fluid ounces of this product in 5 to 10 gallons of water per acre prior to frost and when water bermudagrass is 12 to 18 inches in length. This product is not registered in the State of California for control of water bermudagrass.	0.75 – 1.2	5 – 10	1.5%
<b>Bindweed, field</b> Do not apply this product when field bindweed is under drought stress, as good soil moisture is necessary for active growth and efficacy of this product. For control, apply 3 to 3.8 quarts of this product per acre west of the Mississippi River and 2.3 to 3 quarts per acre east of the Mississippi River when bindweed is at or beyond full bloom. For optimal results, apply in late-summer or fall. Fall application must be made before a killing frost. Also for control, apply 48 fluid ounces of this product, plus an appropriate rate of dicamba, in 10 to 20 gallons of water per acre. Do not apply this mixture using aerial application equipment. For suppression on irrigated agricultural land, apply 24 to 48 fluid ounces of this product, plus an appropriate rate of 2,4-D, in 10 to 20 gallons of water per acre using ground application equipment only. Application may be made following harvest or on fallow ground in the fall when bindweed is actively growing and the majority of runners are 12 inches or more in length. Irrigate at least once to promote active bindweed growth. For suppression, apply 12 fluid ounces of this product, plus 0.5 pound of 2,4-D, in 3 to 10 gallons of water per acre using ground application equipment, or in 3 to 5 gallons of water per acre using aerial application equipment. Application of this tank-mix using aerial equipment is only allowed on fallow fields and in reduced tillage systems. Delay application until maximum emergence has occurred and vines are 6 to 18 inches in length. <b>In California only</b> , apply 24 fluid ounces to 3.8 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed, apply 24 fluid ounces of this product in 3 to 10 gallons of water per acre when bindweed has reached a length of 12 inches or more. Allow maximum weed emergence and runner growth before applying this product. Allow a minimum of 3 days after application before tillage.	0.5 – 3.8	3 – 20	1.5%
<b>Bluegrass, Kentucky</b> Apply 48 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached the boot to early-seedhead stage of development. For partial control in pasture or hay crop renovation, apply 24 to 36 fluid ounces of this product in 3 to 10 gallons of water per acre to actively growing target plants when most have reached 4 to 12 inches in height.	0.8 – 1.7	3 – 40	1.5%
<b>Blueweed, Texas</b> Apply 3 to 3.8 quarts of this product per acre west of the Mississippi River or 2.3 to 3 quarts per acre east of the Mississippi River when plants are at or beyond full bloom. For optimal results, apply in late-summer or fall. Fall application must be made before a killing frost.	2.3 – 3.8	3 – 40	1.5%
<b>Brackenfern</b> Make application to fully expanded fronds that are at least 18 inches long.	2.3 – 3.4	3 – 40	1% - 1.5%
<b>Bromegrass, smooth</b> Apply 48 fluid ounces of this product in 10 to 40 gallons of water per acre when most target plants have reached boot to early-seedhead stage of development. For partial control in pasture or hay crop renovation, apply 24 to 36 fluid ounces of this product in 3 to 10 gallons of water per acre to actively growing bromegrass when it has reached a height of 4 to 12 inches.	0.8 – 1.7	3 – 40	1.5%

<b>Bursage, woolly-leaf</b>	-	3 – 20	1.5%
For control, apply 48 fluid ounces of this product per acre in a tank mixture with dicamba when plants are producing new active growth that has been initiated by moisture for at least 2 weeks and are at or beyond flowering. For partial control, apply 24 fluid ounces of this product per acre in a tank mix with an appropriate rate of dicamba.			
<b>Canarygrass, reed<sup>2</sup></b>	1.7 – 2.3	3 – 40	1.5%
<b>Cattail<sup>2</sup></b>	2.3 – 3.8	3 – 40	1.5%
<b>Clover; red, white<sup>1</sup></b>	2.2 – 3.8	3 – 20	1.5%
Also for control, apply 12 to 24 fluid ounces of this product, in a tank mix with an appropriate rate of 2,4-D, in 3 to 10 gallons of water per acre.			
<b>Cogongrass</b>	2.2 – 3.8	10 – 40	1.5%
Apply in late-summer or fall when cogongrass is at least 18 inches tall. Due to uneven stages of growth and the dense nature of this vegetation preventing good spray coverage, more than one application might be necessary to achieve control.			
<b>Dallisgrass<sup>2</sup></b>	2.3 – 3.8	3 – 20	1.5%
<b>Dandelion<sup>1</sup></b>	2.3 – 3.8	3 – 40	1.5%
Also for control, apply 12 fluid ounces of this product, in a tank mix with an appropriate rate of 2,4-D, in 3 to 10 gallons of water per acre.			
<b>Dock, curly<sup>1</sup></b>	2.3 – 3.8	3 – 40	1.5%
Also for control, apply 12 to 24 fluid ounces of this product, in a tank mix with an appropriate rate of 2,4-D, in 3 to 10 gallons of water per acre.			
<b>Dogbane, hemp</b>	3.4	3 – 40	1.5%
Apply when most target plants have reached the late-bud to flower stage of development. Allow weeds to re-grow to a mature stage prior to application of this product after crop harvest or mowing. For optimal results, apply in late-summer or fall. For suppression, apply 12 fluid ounces of this product, in a tank mix with an appropriate rate of 2,4-D, in 3 to 10 gallons of water per acre using ground application equipment, and in 3 to 5 gallons of water per acre using aerial application equipment. Delay application until maximum emergence of hemp dogbane has occurred.			
<b>Fescue (except tall)<sup>2</sup></b>	2.3 – 3.8	3 – 20	1.5%
<b>Fescue, tall</b>	0.8 – 2.3	3 – 40	1.5%
Apply 72 fluid ounces of this product per acre when most tall fescue has reached the boot to early-seedhead stage of development. For fall application, apply 24 fluid ounces of this product in 3 to 10 gallons of water per acre when plants have 6 to 12 inches of new growth. A sequential application of 12 fluid ounces of this product per acre will improve long-term control and will control seedlings germinating after fall application or in the following spring.			
<b>Guineagrass</b>	1.7 – 2.3	3 – 40	1%
Apply when most target plants have reached the 7-leaf stage of growth. Ensure thorough coverage when using a handheld sprayer. In Texas and the ridge of Florida, apply 48 fluid ounces of this product per acre for control. In the flatwoods region of Florida, 72 fluid ounces per acre is needed for control.			
<b>Horsenettle<sup>1</sup></b>	2.3 – 3.8	3 – 20	1.5%
<b>Horseradish</b>	3.4	3 – 40	1.5%
Apply when most plants have reached the late-bud to flower stage of growth. For optimal results, apply in late-summer or fall.			
<b>Iceplant<sup>1</sup></b>	-	-	1.5 – 2.0%
Thorough coverage of the target weed with this product will provide optimal control.			
<b>Jerusalem artichoke<sup>1</sup></b>	2.3 – 3.8	3 – 20	1.5%
<b>Johnsongrass</b>	0.5 – 2.3	3 – 40	1%
In annual cropping systems, apply 24 to 48 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 48 fluid ounces of this product when applying 10 to 40 gallons of water per acre. On non-crop sites or in areas where annual tillage is not practiced (no-till), apply 48 to 72 fluid ounces of this product in 10 to 40 gallons of water per acre. For optimal results, apply when most johnsongrass has reached the boot to head stage of development or in the fall prior to frost. Allow a minimum of 7 days after application before tillage. Do not tank-mix with residual herbicides when applying 24 fluid ounces of this product per acre. For burndown of johnsongrass, apply 12 fluid ounces of this product in 3 to 10 gallons of water per acre before plants reach a height of 12 inches and allow a minimum of 3 days after application before tillage. For partial control or suppression, apply a 0.75-percent solution of this product as a spot treatment when johnsongrass is 12 to 18 inches tall. Ensure that spray coverage is uniform and complete.			
<b>Kikuyugrass</b>	1.5 – 2.3	3 – 40	1.5%
Apply when most kikuyugrass is at least 8 inches tall (3- or 4-leaf stage of growth). Allow a minimum of 3 days after application before tillage.			
<b>Knapweed</b>	3.4	3 – 40	1.5%
Apply when most target plants have reached the late-bud to flower stage of growth. For optimal results, apply in late-summer or fall.			
<b>Lantana</b>	-	-	1%
Apply at or beyond the bloom stage of growth.			
<b>Lespedeza<sup>1</sup></b>	2.3 – 3.8	3 – 20	1.5%
<b>Milkweed, common</b>	2.3	3 – 40	1.5%
Apply when most plants have reached the late-bud to flower stage of growth.			

<b>Muhly, wirestem</b> Apply 24 fluid ounces of this product in 3 to 10 gallons of water per acre, or 48 fluid ounces when applying in 10 to 40 gallons of water per acre or whenever applying in pasture, sod, or non-crop areas, when wirestem muhly is at least 8 inches tall. Do not till the soil between harvest and fall application, or in the fall or spring prior to spring application. Allow a minimum of 3 days after application before tillage.	0.8 – 1.7	3 – 40	1.5%
<b>Mullein, common</b> <sup>1</sup>	2.3 – 3.8	3 – 20	1.5%
<b>Napiergrass</b> <sup>2</sup>	2.3 – 3.8	3 – 20	1.5%
<b>Nightshade, silverleaf</b> For optimal results, apply when at least 60 percent of the target plants have berries. Fall application must be made before a killing frost.	1.7	3 – 10	1.5%
<b>Nutsedge; purple, yellow</b> For control of nutsedge plants and immature nutlets, apply 72 fluid ounces of this product per acre or a 1- to 1.5-percent solution when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and will need repeated applications of this product after germination for long-term control. Sequential applications of 24 to 48 fluid ounces of this product in 3 to 10 gallons of water per acre when a majority of the nutsedge plants are in the 3- to 5-leaf stage (less than 6 inches tall) will also provide control. Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control. For partial control of existing nutsedge, apply 12 to 48 fluid ounces of this product in 3 to 40 gallons of water per acre when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat this application, as needed, to control newly emerging plants or re-growth of existing plants.	0.5 – 2.3	3 – 40	1 – 1.5%
<b>Orchardgrass</b> Apply 48 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached the boot to early-seedhead stage of development. For partial control in pasture or hay crop renovation, apply 24 to 36 fluid ounces of this product in 3 to 10 gallons of water per acre when orchardgrass is actively growing and has reached 4 to 12 inches in height. When going from orchardgrass sod to no-till corn, apply 24 to 36 fluid ounces of this product in 3 to 10 gallons of water per acre to orchardgrass that is a minimum of 12 inches tall for spring application and 6 inches tall for fall application. Allow a minimum of 3 days after application before planting. A sequential application of atrazine will be necessary to achieve optimum results.	0.8 – 1.8	3 – 40	1.5%
<b>Pampasgrass</b> Apply this product when pampasgrass is at or beyond the boot stage of growth. Thorough coverage will provide optimal control.	-	-	1 – 1.5%
<b>Para grass</b> <sup>2</sup>	2.3 – 3.8	3 – 20	1.5%
<b>Phragmites</b> For partial control and optimal results, apply this product in late-summer or fall when plants are actively growing and in full bloom. Application before or after this stage could result in reduced control. Due to the dense nature of this vegetation (which can prevent good spray coverage) and uneven stages of growth, more than one application might be necessary to achieve control. Visual symptoms of control will be slow to develop	2.3 – 3.8	10 – 40	1 – 1.5%
<b>Poison hemlock</b> Apply this product using a handheld sprayer with a spray-to-wet technique. Optimum results are obtained when thoroughly applied to target plants that are at the bud to full-bloom stage of growth.	-	-	1 – 1.5%
<b>Pokeweed, common</b> Apply to actively growing target plants up to 24 inches tall.	1	3 – 40	1.5%
<b>Quackgrass</b> In annual cropping systems or in pastures and sod fields to be cultivated with deep tillage, apply 24 fluid ounces of this product in 3 to 10 gallons of water per acre, or 48 fluid ounces in 10 to 40 gallons of water per acre, when quackgrass is 6 to 8 inches in height. Do not tank-mix with residual herbicides when using the 24-fluid-ounce rate. Do not till between harvest and fall application, or in the fall or spring prior to spring application. Allow a minimum of 3 days after application before tillage. In pastures or sods, use a moldboard plow for optimal results. In pastures, sod fields or non-crop areas where deep tillage will not follow application of this product, apply 48 to 72 fluid ounces in 10 to 40 gallons of water per acre when quackgrass is greater than 8 inches tall.	0.8 – 2.3	3 – 40	1.5%
<b>Redvine</b> For suppression, make two applications of 18 fluid ounces of this product 7 to 14 days apart, or a single application of 48 fluid ounces, in 5 to 10 gallons of water per acre in late-September or early-October to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Apply a minimum of 1 week before a killing frost.	0.7 – 1.7	5 – 10	1.5%
<b>Reed, giant</b> Optimal results can be obtained when application is made in late-summer or fall.	-	-	1.5%
<b>Ryegrass, perennial</b> In annual cropping systems, apply 24 to 48 fluid ounces of this product in 3 to 10 gallons of water per acre, or 48 fluid ounces when applying in 10 to 40 gallons of water per acre. On non-crop sites or in fields where annual tillage is not practiced (no-till), apply 48 to 72 fluid ounces of this product in 10 to 40 gallons of water per acre. For optimal results, apply when most ryegrass has reached the boot to head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when applying 22 fluid ounces of this product per acre.	0.8 – 2.3	3 – 40	1%
<b>Smartweed, swamp</b> <sup>1</sup> Also for control, apply 12 fluid ounces of this product in a tank mix with an appropriate rate of 2,4-D in 3 to 10 gallons of water per acre in late-summer or fall.	2.3 – 3.8	3 – 40	1.5%
<b>Sowthistle, perennial</b> Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in late-summer or fall, allow a minimum of 4 weeks for initiation of active growth and rosette development prior to application of this product. Fall application must be made before a killing frost. Allow a minimum of 3 days after application before tillage.	1.7 – 2.3	3 – 40	1.5%
<b>Spurge, leafy</b>	-	3 – 10	1.5%

For suppression, apply 12 fluid ounces of this product in a tank mix with an appropriate rate of 2,4-D in 3 to 10 gallons of water per acre in late-summer or fall. If mowing has occurred, delay application until most target plants are 12 inches tall.		
<b>Starthistle, yellow</b>	1.7	10 – 40
Optimal results can be obtained when application is made during the rosette, bolting or early-flower stage.		
<b>Sweet potato, wild</b>	-	-
For partial control, apply to plants that are at or beyond the bloom stage of growth. More than one application might be needed.		
<b>Thistle, artichoke</b>	-	-
For partial control, apply when plants are at or beyond the bloom stage of growth. More than one application might be needed.		
<b>Thistle, Canada</b>	1.7 – 2.3	3 – 40
Apply when most target plants are at or beyond the bud stage of development. After harvest, mowing or tillage in late-summer or fall, allow a minimum of 4 weeks for initiation of active growth and rosette development prior to application of this product. Fall application must be made before a killing frost. For suppression in the spring, apply 24 fluid ounces of this product alone, or 12 fluid ounces of this product in a tank mix with an appropriate rate of 2,4-D, in 3 to 10 gallons of water per acre when rosette is a minimum of 6 inches in diameter. Application may be made as long as leaves are still green and plants are actively growing. Allow a minimum of 3 days after application before tillage.		
<b>Timothy</b> <sup>2</sup>	1.7 – 2.3	3 – 40
<b>Torpedograss</b>	2.8 – 3.8	3 – 40
For partial control, apply when most target plants are at or beyond the seedhead stage of development. More than one application will be needed to achieve control. Fall application must be made before frost.		
<b>Trumpet creeper</b>	1.7	5 – 10
For partial control, apply in late-September or October when trumpet creeper is a minimum of 18 inches tall and has been growing 45 to 60 days since the last tillage operation. Make application a minimum of 1 week before a killing frost.		
<b>Vaseygrass</b> <sup>2</sup>	2.3 – 3.8	3 – 20
<b>Velvetgrass</b> <sup>2</sup>	2.3 – 3.8	3 – 20
<b>Wheatgrass, western</b> <sup>2</sup>	1.7 – 2.3	3 – 40

<sup>1</sup> Apply when most plants have reached the early-bud stage of growth.

<sup>2</sup> Apply when most plants have reached the early-heading stage of growth.

## 15.0 WOODY BRUSH, TREES AND VINES RATE SECTION

Apply this product during full leaf expansion, unless otherwise directed. Use the higher rate of application or spray solution concentration within a given range for larger plants or in areas of dense vegetative growth. On vines, use the higher rate of application or spray solution concentration for plants that have reached the woody stage. Optimal results can be obtained when application is made in late-summer or fall after fruit formation.

In arid areas, optimal results can be obtained when application is made in spring to early-summer when brush species are at high moisture content and flowering.

Unless otherwise directed, make broadcast applications in 3 to 40 gallons of water per acre. Ensure thorough coverage when using handheld sprayers. Herbicidal symptoms might not appear prior to frost or senescence following application in the fall.

Allow a minimum of 7 days after application before tillage, mowing or removal of vegetation in the application area. Repeat applications might be necessary to control plants regenerating from underground parts or seed. Some autumn color on undesirable deciduous species is acceptable when applying this product, provided no major leaf drop has occurred. Reduced performance could result if fall application is made after a frost.

**WOODY BRUSH, TREES AND VINES RATE TABLE**

Species	Broadcast Rate (quarts/acre)	Handheld Sprayer Concentration (%Solution)
<b>Alder</b>	2.3 – 3.4	1%
<b>Ash</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Aspen, quaking</b>	1.7 – 2.3	1%
<b>Bearmat (Bearclover)</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Beech</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Birch</b>	1.7 – 2.3	1%
<b>Blackberry</b>	2.3 – 3.4	1%
Apply after target plants have reached full leaf maturity. Optimal results can be obtained when application is made in late-summer or fall. Apply a 0.7-percent solution of this product after berries have set or dropped in late-fall. After leaf drop and until		

a killing frost or as long as stems are green, apply 2.3 to 3 quarts of this product in 10 to 40 gallons of water per acre.		
<b>Blackgum</b>	1.7 – 3.8	1 – 1.5%
<b>Bracken</b>	1.7 – 3.8	1 – 1.5%
<b>Broom; French, Scotch</b>	-	1 – 1.5%
<b>Buckwheat, California</b> <sup>1,2</sup>	-	1 – 1.5%
<b>Cascara</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Catsclaw</b> <sup>1</sup>	-	1%
<b>Ceanothus</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Chamise</b> <sup>2</sup>	-	1%
<b>Cherry; bitter, black, pin</b>	1.7 – 2.3	1%
<b>Coyote brush</b> Apply when at least 50 percent of the new leaves are fully developed.	-	1 – 1.5%
<b>Dogwood</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Elderberry</b>	1.7 – 2.3	1%
<b>Elm</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Eucalyptus</b> For control of eucalyptus re-sprouts, apply when re-sprouts are 6 to 12 feet tall. Ensure complete coverage. Application to drought-stressed eucalyptus plants will result in less than optimum results.	-	1.5%
<b>Florida holly (Brazilian Peppertree)</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Gorse</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Hasardia</b> <sup>1,2</sup>	-	1 – 1.5%
<b>Hawthorn</b>	1.7 – 2.3	1%
<b>Hazel</b>	1.7 – 2.3	1%
<b>Hickory</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Honeysuckle</b>	2.3 – 3.4	1%
<b>Hornbeam, American</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Kudzu</b> More than one application might be needed to achieve control.	3 – 3.8	1.5%
<b>Locust, black</b> <sup>1</sup>	1.7 – 3.4	1 – 1.5%
<b>Madrone re-sprouts</b> <sup>1</sup> Apply to re-sprouts that are 3 to 6 feet tall. Optimal results can be obtained with spring or early-summer application.	-	1.5%
<b>Manzanita</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Maple, red</b> Apply a 1-percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 44 to 86 fluid ounces of this product per acre.	1.7 – 3.4	1%
<b>Maple, sugar</b> Apply when at least 50 percent of the new leaves are fully developed.	-	1%
<b>Monkey flower</b> <sup>1,2</sup>	-	1 – 1.5%
<b>Oak; black, white</b> <sup>1</sup>	1.7 – 3.4	1 – 1.5%
<b>Oak, post</b>	2.3 – 3.4	1%
<b>Oak, northern</b> Apply when at least 50 percent of the new pin leaves are fully developed.	-	1%
<b>Oak, southern red</b>	1.7 – 2.3	1%
<b>Persimmon</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Pine</b>	1.7 – 3.8	1 – 1.5%
<b>Poison ivy/Poison oak</b> More than one application might be needed to achieve control. Application in the fall must be made before leaves lose green color.	2.5 – 3.8	1.5%
<b>Poplar, yellow</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Redbud, eastern</b>	1.7 – 3.8	1 – 1.5%
<b>Rose, multiflora</b> Make application prior to leaf deterioration by leaf-eating insects.	1.7	1 – 1.5%
<b>Russian olive</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Sage, black</b> <sup>2</sup>	-	1%
<b>Sage, white</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Sagebrush, California</b> <sup>2</sup>	-	1%
<b>Salmonberry</b>	1.7 – 2.3	1%
<b>Saltcedar</b>	1.7 – 3.8	1 – 1.5%
<b>Sassafras</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Sourwood</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Sumac; poison, smooth, winged</b> <sup>1</sup>	1.7 – 3.4	1 – 1.5%
<b>Sweetgum</b>	1.7 – 2.3	1%
<b>Swordfern</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Tallowtree, Chinese</b> <sup>2</sup>	-	1%
<b>Tan oak re-sprouts</b> <sup>1</sup>	-	1.5%



Apply to re-sprouts that are less than 6 feet tall. Optimal results can be obtained following application in the fall.		
<b>Thimbleberry</b>	1.7 – 2.3	1%
<b>Tobacco, tree</b> <sup>1</sup>	-	1 – 1.5%
<b>Trumpet creeper</b>	1.7 – 2.3	1%
<b>Vine maple</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Virginia creeper</b>	1.7 – 3.8	1 – 1.5%
<b>Waxmyrtle, southern</b> <sup>1</sup>	1.7 – 3.8	1 – 1.5%
<b>Willow</b>	2.3 – 3.4	1%

<sup>1</sup> Partial control.

<sup>2</sup> Thorough coverage of foliage is necessary for optimal results.

## 16.0 NONCROP TERRESTRIAL USE SITES

This product may be used according to the directions for use described on this label to control weeds, woody brush, trees and vines listed on this label on any terrestrial site described on this label.

This product may be used to control weeds, woody brush, trees and vines on maintained landscapes, on improved and unimproved land, on lawns and turf and around ornamentals on industrial, commercial and residential sites, including airports, apartment complexes, chaparrals, ditch banks, driveways, dry ditches, dry canals, farmsteads, fencerows, forestry sites, golf courses, greenhouses, lumber yards, manufacturing sites, municipal sites, natural areas, nurseries, office complexes, ornamental beds, parks, parking areas, pastures, petroleum tank farms, pumping installations, railroads, rangeland, recreational areas, residential areas, roadsides, schools, shadehouses, sod and turfgrass seed farms, sports complexes, storage areas, substations, utility rights-of-way, utility sites, warehouse areas, wildlife food plots and wildlife management areas.

This product may be used for non-selective control of unwanted vegetation on any site listed on this label for trim-and-edge application around objects, including around building foundations, equipment storage areas and trees, along and in fences, and to eliminate unwanted weeds growing in and around established shrub beds and ornamental plantings. This product may also be used for complete elimination of vegetation from a terrestrial site prior to planting ornamentals, flowers, or turfgrass (sod or seed), and prior to land development, including prior to beginning construction projects or the laying of asphalt or other road material. Application of this product may be repeated, as needed, to maintain bare ground, up to a total application of 8 quarts per acre per year.

This product may be used for establishment and maintenance of fuel breaks, for establishing fire perimeters and black lines, along fire roads and to facilitate prescribed burning practices on any site described on this label.

[*Optional label text:* This product may also be used for weed control or growth regulation on] [*Optional list of any terrestrial uses that are included on this Master Label, including, Christmas tree farms, farmsteads, production nurseries, and sod farms and turfgrass seed farms.*]

Unless otherwise directed, application of this product may be made according to the directions for use in the sections that follow to any of these sites using any method of application described on this label to control any weeds, woody brush, trees and vines listed in the "WEEDS CONTROLLED" section of this label. [*Alternative label text:* Unless otherwise directed, application of this product may be made according to the directions for use in the sections that follow on any of these sites using any method of application described on this label to control any weeds, woody brush, trees and vines listed in the "ANNUAL WEEDS RATE SECTION," "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH, TREES AND VINES RATE SECTION" of this label.]

## 17.0 ADDITIONAL NONCROP SITE MANAGEMENT INFORMATION

The following sections contain additional use information specifically related to certain use sites. Unless otherwise directed, any application of this product described in the "WEEDS CONTROLLED" section or any other section of this label may be made on the use sites described in the sections that follow, where applicable, using any method of application described on this label that is appropriate.

### 17.1 Forestry, Hardwood and Christmas Tree Management

This product may be used for control or partial control of woody brush, trees and herbaceous weeds on any tree site, including forestry settings, Christmas tree plantations, and silvicultural and production nursery sites, using any method of application listed on this label. See the "WEEDS CONTROLLED" section of this label for application rates and specific use directions.



### Weed Management, Site Preparation

This product may be used to control or partially control undesirable woody brush, trees, vines and herbaceous weeds listed on this label for preparing sites prior to planting any tree species, including Christmas trees, eucalyptus trees and hybrid tree cultivars, and for controlling weeds around established trees, [Optional text: for the release of conifer and hardwood trees,] establishing wildlife openings and maintaining roads on any tree site.

TANK MIXTURES: This product may be applied in a tank-mix with the products listed in this section to increase the spectrum of vegetation controlled. Any application rate of this product listed on this label may be used in a tank-mix with the following products for tree site management, including site preparation, provided that the product is labeled for the use on the site of application and prior to planting the desired species. Refer to the individual label of all products used in the tank mixture for approved uses and application rates. Read and follow directions for use and precautions for each product used, including planting interval restrictions, if any. Use this product according to the most restrictive precautionary statements of any product in the mix.

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[ imazapyr; metsulfuron methyl; sulfometuron methyl; triclopyr ]

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For control of herbaceous weeds, apply these tank-mix products at the lower end of the application rate range specified on the product label. For control or partial control of dense stands or for hard-to-control woody brush, trees and vines, apply these products at an application rate or spray solution concentration towards the higher end of the given range.

[Optional label text: Do not apply this product as an over-the-top broadcast spray for conifer or hardwood release, unless otherwise directed on this label or on separate supplemental labeling for this product.]

### Conifer Release [This section is optional in the final printed label]

This product may be broadly applied over the top of conifer tree species listed in this section after formation of final conifer resting buds in the fall or prior to initial bud swelling in the spring for control, partial control or suppression of herbaceous weeds and hardwoods listed in the "WEEDS CONTROLLED" section of this label to facilitate the release of these tree species in a forestry, plantation or nursery setting. Unless otherwise directed, make this application only where conifers have been established for a minimum of one year.

#### PRECAUTION:

- Conifer injury can occur when this product is applied at rates higher than prescribed on this label, where spray applications overlap, if application is made when conifers are actively growing, or when they are growing under stress from drought, flood, improper planting or insect, animal or disease damage.

#### Conifer Release Outside the Southeastern United States

For release of the following conifer species growing for a minimum of one year in most areas outside the southeastern United States, apply 24 to 48 fluid ounces of this product per acre as a broadcast application over the top of the conifer trees.

Douglas fir	Hemlock	California redwood
Fir species	Pines*	Spruce

\*Includes all species **except** loblolly pine, longleaf pine, shortleaf pine or slash pine.

Apply 24 to 40 fluid ounces of this product for release of Douglas fir, pine and spruce that have been established for only one growing season (except in California).

For release of spruce (*Picea* spp.) in Maine, Michigan, Minnesota, New Hampshire and Wisconsin, up to 2.3 quarts of this product may be applied after formation of final resting buds in the fall for control of woody brush and tree species.

#### PRECAUTION:

- Ensure that the conifers are well hardened off before application of this product. [Optional text, if adding surfactant to spray solutions of this product is allowed: The addition of non-ionic surfactants to spray solutions of this product when making over-the-top conifer release applications could cause conifer injury.]

#### Conifer Release in the Southeastern United States

For release of the following conifer species established for more than one year in the southeastern United States, apply

36 to 60 fluid ounces of this product per acre in the fall as a broadcast application over the top of the trees. For release of these species after only one year, apply only 24 fluid ounces of this product per acre.

Eastern white pine	Longleaf pine	Slash pine
Loblolly pine	Shortleaf pine x	Virginia pine

**TANK MIXTURES:** This product may be applied for conifer release in a tank-mix with the following products to provide a broader spectrum of postemergence weed control and for residual control of weeds listed on the label of those products. Only apply these tank mixtures over the top of conifer species that are approved for this use for all products in the mix. Refer to the individual product labels for approved uses and application rates. Read and follow all directions for use and precautions for each product used. Use this product according to the most restrictive precautionary statements of any product in the mixture.

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[atrazine; imazapyr; sulfometuron methyl]

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For release of Douglas fir established for a minimum of one growing season prior to bud swell in early-spring, apply 24 fluid ounces of this product in a tank-mix with 4 pounds (active ingredient) of atrazine per acre.

For herbaceous release of loblolly pine, Virginia pine and longleaf pine in the spring and early-summer, apply 12 to 18 fluid ounces of this product in a tank-mix with 2 to 4 ounces of Spyder Extra per acre.

#### **Late-Summer and Fall after Resting Bud Formation**

For release of jack pine and white spruce, apply 24 to 48 fluid ounces of this product in a tank-mix with 1 to 3 ounces of Spyder Extra per acre. For release of white pine, apply 24 to 48 fluid ounces of this product in a tank-mix with 1 to 1.5 ounces of Spyder Extra per acre.

For release of Douglas fir, apply 24 to 36 fluid ounces of this product in a tank-mix with 2 to 6 ounces of Polaris per acre.

For release of balsam fir and red spruce, apply 48 fluid ounces of this product in a tank-mix with 1 to 2.5 ounces of Polaris per acre.

#### **17.2 Native and Wildlife Habitat Management**

This product may be used to control exotic and other undesirable vegetation in wildlife habitat and natural areas, including riparian and estuarine areas, rangeland, and wildlife refuges. Application may be made to allow recovery of native plant species or prior to planting desirable native species, and for similar broad-spectrum vegetation control. Spot treatment, cut stump, cut stem, stem injection, wiper applicator and all other methods of application listed on this label may be used to selectively remove unwanted plants for habitat management and enhancement.

This product may also be used to eliminate annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait a minimum of 7 days after application before tilling to allow translocation of this product into underground plant parts.

#### **17.3 Ornamental and Production Nursery Management**

All uses of this product described on this label may be used in a plant nursery setting using any method of application described.

This product may be used to control weeds growing around established woody ornamental species, [including] arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce and yew. This product may also be used to trim and edge around potted plants and other objects in a plant nursery.

This product may also be used to clear an area of unwanted vegetation prior to planting any ornamental plant, tree, shrub or other plants.

#### **PRECAUTIONS:**

- Protect desirable plants from the spray solution using shields or coverings made of waterproof material.

- Take care to avoid contact of spray, drift or mist with foliage, green stems or immature bark of established ornamental species.

#### **Greenhouse/Shadehouse**

This product may be used to control weeds growing in and around greenhouses and shadehouses.

#### **RESTRICTIONS:**

- Desirable vegetation must not be present during application in a greenhouse.
- Turn air circulation fans off before applying this product inside a greenhouse or shadehouse and until the application solution has dried.

### **17.4 Commercial, Residential and Recreational Area Management**

All applications of this product described on this label may be used on commercial, residential and recreational areas, including parks, schools and athletic fields, using any method of application described on this label, including spot treatment of unwanted vegetation, trim-and-edge application around trees, fences, walking paths, buildings, sidewalks, nature trails, and other objects in these areas, to eliminate unwanted weeds growing in established shrub and ornamental beds, for turf management and renovation, and to eliminate vegetation from a site prior to development, including prior to planting an area to ornamentals, flowers or turfgrass (sod or seed), or beginning construction projects.

### **17.5 Pasture Management**

The use of this product in pastures includes use on bahiagrass, bermudagrass, bluegrass, brome, fescue, guineagrass, kikuyugrass, orchardgrass, pangola grass, ryegrass, Timothy, and wheatgrass.

#### **Preplant, Preemergence, Pasture Renovation**

This product may be applied prior to planting or emergence of forage or perennial grasses. Refer to the "WEEDS CONTROLLED" section of this label for application rates of this product for control of specific weeds.

#### **RESTRICTIONS:**

- Pre-harvest interval (PHI): If the total application rate of this product is 2.3 quarts per acre or less, no waiting period between application and feeding or livestock grazing is required.
- Pre-harvest interval (PHI): If the rate is greater than 2.3 quarts per acre, remove domestic livestock before application and wait a minimum of 8 weeks after application before grazing or harvesting.

#### **Spot Treatment, Wiper Applicator**

This product may be applied in pastures as a spot treatment or over the top of desirable grasses using a wiper applicator to control taller growing weeds. For optimal weed control, remove domestic livestock before application to allow for sufficient plant growth and wait a minimum of 7 days after application before grazing livestock or harvesting for feed. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

#### **RESTRICTIONS:**

- For spot treatment or use with a wiper applicator at rates of 2.3 quarts per acre or less, this product may be applied over the entire pasture or any portion of it. At rates greater than 2.3 quarts per acre, this product may be applied over no more than 10 percent of the total pasture at any one time.
- Application may be repeated in the same area at 30-day intervals.

#### **Weed Suppression in Dormant Pastures**

This product may be applied in dormant pastures to suppress competitive growth and seed production of annual weeds and other undesirable vegetation. Apply 9 to 12 fluid ounces of this product per acre using broadcast application equipment on pastures in late-fall after desirable perennial grasses have reached dormancy or in late-winter before desirable perennial grasses break

dormancy and initiate green growth.

**PRECAUTIONS:**

- Higher application rates may be used for hard-to-control weeds; however, higher rates can cause stand reduction.
- Some stunting of perennial grasses can occur if broadcast application is made when they are not dormant.

**RESTRICTIONS:**

- Pre-harvest interval (PHI): No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 2.3 quarts of this product per acre per year onto pasture grasses except for renovation.
- If reseeding is needed due to severe stand reduction, no waiting period is required after application of this product before seeding the pasture grasses listed at the beginning of this section; for all other pasture grasses, wait a minimum of 30 days after application before seeding.

## **17.6 Railroad Management**

All uses of this product described in the "WEEDS CONTROLLED" or any other section of this label may be used on railroad sites using any method of application described.

Application of this product along railroad rights-of-way may be made in up to 80 gallons of spray solution per acre.

### **Bare Ground, Ballast and Shoulders, Crossings, Spot Treatment**

This product may be used to maintain bare ground on railroad ballast and shoulders and reduce the need for mowing and mechanical brush removal along railroad rights-of-way. Application of this product may be repeated as weeds continue to emerge in order to maintain bare ground, up to a maximum total application rate of 8 quarts of this product per acre per year.

**TANK MIXTURES:** This product may be applied in a tank mixture with the following products for optimal control of woody brush and trees for bare ground, ballast and shoulder, crossing and spot treatment, and brush, tree and vine control on railroad sites, provided that the product used is labeled for these applications. Refer to the individual label of all products used in the tank mixture for approved uses and application rates. Always read and follow label directions for each product in the mix.

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[2,4-D; atrazine; bromacil; chlorsulfuron; clopyralid; dicamba; diquat; diuron; hexazinone; imazapyr; metsulfuron methyl; pelargonic acid; simazine; sulfometuron methyl; sulfosulfuron; tebuthiuron; triclopyr]

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### **Brush, Tree and Vine Control**

This product may be used to control woody brush, trees and vines along railroad rights-of-way. Apply 3 to 8 quarts of this product in up to 80 gallons of spray solution per acre as a broadcast application using either a boom or boomless sprayer. Apply a 0.75- to 1.7-percent solution of this product when using high-volume application equipment with a spray-to-wet technique, or a 5- to 8-percent solution when using low-volume directed sprays for spot treatment.

**TANK MIXTURES:** This product may be applied in a tank-mix with one or more of the following products for optimal control of woody brush, trees and vines along railroad rights-of-way, provided that the product used is labeled for use on these sites. Refer to the individual product label for approved sites and application rates.

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[chlorsulfuron; clopyralid; dicamba; fosamine; hexazinone; imazapyr; metsulfuron methyl; picloram; triclopyr]

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### **Weed Control in Dormant and Actively Growing Bermudagrass**

This product may be used to control or partially control many annual and perennial weeds in dormant and actively growing bermudagrass along railroad rights-of-way. See the "WEEDS CONTROLLED" section of this label for directions for use of this product for weed control in grasses.

### 17.7 Rangeland Management

This product will control or suppress many annual weeds growing in perennial cool- and warm-season grass rangeland. Slight discoloration of the desirable grasses could occur, but will re-green and resume growing under moist soil conditions as effects of this product wear off.

Preventing seed production is critical to the control of invasive annual grassy weeds on rangeland. Yearly application of this product to eliminate invasive annual weeds before they produce seed will help eliminate viable weed seeds from the soil. Delay grazing of the area after application of this product to allow desirable perennials to grow, flower and re-seed the area.

**Bromus Control:** A broadcast application of 6 to 12 fluid ounces of this product per acre will control or suppress downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*), cheatgrass (*Bromus secalinus*), cereal rye and jointed goatgrass on rangeland. For optimal results, apply this product when most brome plants are in early-flower and before the plants, including seedheads, turn color. Allow for secondary weed flushes to occur after spring rains to further deplete the seed reserve in the soil and encourage perennial grass conversion on weedy sites. Apply this product in the fall in areas where spring moisture is normally limited and fall germination allows for good weed growth and weed seed depletion.

**Medusahead Control:** To control or suppress medusahead, apply 12 fluid ounces of this product per acre at the 3-leaf stage. Delaying application beyond this stage will result in reduced or unacceptable control. Controlled burning prior to application of this product will eliminate the thatch layer produced by slowly decaying culms. Allow new weed growth to occur before applying this product after a burn. Repeat this application annually to eliminate medusahead seeds in the soil and allow desirable perennial grasses to repopulate the area.

#### RESTRICTIONS:

- Do not apply more than 2.3 quarts of this product per acre per year on rangeland.
- Do not use ammonium sulfate when applying this product on rangeland grasses.
- No waiting period between application of this product and feeding or livestock grazing is required.

### 17.8 Roadside Management

All uses of this product described on this label may be used for weed management along roadways, including weed control in dormant and active bermudagrass and bahiagrass, weed control along shoulders and under and around guardrails, signposts and other objects along the road, using any method of application described on this label.

**TANK MIXTURES:** This product may be tank-mixed with the following products for shoulder, guardrail, spot treatment and maintaining bare ground applications, provided that the product used is labeled for use on these sites. Refer to the individual product labels for approved uses and application rates.

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[2,4-D; atrazine; bromacil; chlorsulfuron; clopyralid; dicamba; diuron; fosamine; hexazinone; imazapic; imazapyr; metsulfuron methyl; oryzalin; oxadiazon; pendimethalin; picloram; prodiamine; simazine; sulfometuron; sulfosulfuron; triclopyr]

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### 17.9 Utility Management

This product may be used along electrical power, pipeline and telephone rights-of-way, and on all sites associated with these utility rights-of-way, including substations, access roads and railroads, and along similar rights-of-way that run in conjunction with utilities, for spot treatment of unwanted vegetation, side-trimming, trim-and-edge application around objects, weed control prior to planting a utility site to ornamentals, flowers, or turfgrass (sod or seed), turf management, to eliminate unwanted weeds growing in established shrub or ornamental beds, to prepare or establish wildlife openings and for eliminating vegetation prior to beginning construction projects. Application of this product may be repeated as needed to maintain bare ground as weeds continue to emerge, up to a maximum application rate of 8 quarts per acre per year.

**TANK MIXTURES:** This product may be tank-mixed with the following products for use on utility sites, provided that the product used

is labeled for use on these sites. Refer to the individual product label for approved uses and application rates. For control of herbaceous weeds, use a lower application rate or spray solution concentration within the given ranges for these tank-mix products and increase the rate or concentration toward the higher end of the ranges for control of dense stands or hard-to-control woody brush, trees and vines.

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[2,4-D; atrazine; bromacil; chlorsulfuron; clopyralid; dicamba; diuron; fosamine; hexazinone; imazapic; imazapyr; metsulfuron methyl; oryzalin; pendimethalin; prodiamine; simazine; sulfometuron methyl; sulfosulfuron; triclopyr]

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Ensure that the Tahoe product is thoroughly mixed with water according to label directions before adding this product to the spray mixture. Maintain continuous agitation when adding this product in order to avoid tank-mix compatibility problems.

For optimal results with side trimming, apply this product in a tank-mix with Tahoe.

### 17.10 Bioenergy

This product may be applied as preplant broadleaf weed control, preemergent broadleaf weed control, and for broadleaf weed control when the crop is in a state of dormancy, for giant reedgrass (*Arundo donax*), switchgrass (*Panicum virgatum*) giant Miscanthus (*Miscanthus x giganteus*) and other non-food perennial grass bioenergy crops. It also can be applied as preplant broadleaf weed control, preemergent broadleaf weed control, and for broadleaf weed control when the crop is in a state of dormancy, for hybrid poplar trees, cottonwood trees and willow trees grown as bioenergy crops. Apply when weeds are actively growing.

This product can be used to control undesirable vegetation when the bioenergy crop is in a state of dormancy for broadleaf weed control. Bioenergy crops include giant reedgrass (*Arundo donax*), switchgrass (*Panicum virgatum*) giant Miscanthus (*Miscanthus x giganteus*), and other non-food perennial grass bioenergy crops. It also can be used to control undesirable vegetation in hybrid poplar trees, cottonwood trees and willow trees grown as bioenergy crops when the bioenergy crop is in a state of dormancy.

For specific rates of application for various annual and perennial weeds, see the "WEEDS CONTROLLED" section of the label. Applications may be made with wiper applicators or conventional spray equipment. For selective applications with broadcast spray equipment, apply 9 to 12 fluid ounces per acre of this product in early spring before desirable bioenergy crops break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy. Treat when bioenergy crops are in a state of dormancy. Bioenergy crop injury may occur if applications are made when crops are not dormant.

#### PRECAUTIONS:

- Use sufficient gallonage for thorough and uniform coverage, but a minimum of 8 gallons per acre for broadcast application.
- Apply to actively growing grass and broadleaf weeds.
- This product does not provide residual control; therefore, delay application until maximum weed emergence. A second treatment may be necessary to control later germinating weeds.

#### RESTRICTIONS:

- Maximum of 6 quarts of this product per acre per year.
- Do not make more than 2 applications per year.
- Applications must be made at least 30 days prior to planting.
- Do not apply through any type of irrigation system.
- Do not hay or graze treated plantings.
- Treated plantings not to be consumed by human or animal.

## 18.0 NONCROP WEEDS CONTROLLED

Read the entire label before proceeding to use this product.

Always use the higher application rate or spray solution concentration of this product within a given range when weed growth is heavy or dense, or when weeds are growing in an undisturbed (non-cultivated) area.

Poor weed control could be realized if application is made to weeds covered with dust. For weeds that have been mowed, grazed or cut, allow re-growth to occur prior to application of this product.

Refer to the sections that follow for application rates and timing of application for the control of annual and perennial weeds, woody brush, trees and vines.

### 18.1 Weed Control, Renovation and Chemical Mowing in Turf

The use of this product described in this section may be applied to turfgrass growing on any terrestrial site listed on this label. Ensure that any tank-mix product applied with this product is labeled for the intended use and on the site of application.

#### Weed Control in Dormant Bermudagrass and Bahiagrass

This product may be used to control or suppress many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahiagrass prior to spring green-up in areas where these turfgrasses are desirable ground covers and some temporary injury or discoloration can be tolerated.

Apply 6 to 48 fluid ounces of this product in 10 to 40 gallons of water per acre when bermudagrass and bahiagrass are dormant and prior to spring green-up.

Application of more than 12 fluid ounces of this product per acre on highly maintained bermudagrass and bahiagrass turf, such as golf courses and lawns, could result in injury or delayed green-up in the spring.

For residual weed control in dormant bermudagrass and bahiagrass, this product may be tank-mixed with Outrider<sup>®</sup> or Spyder Extra herbicides. Apply 6 to 48 fluid ounces of this product in a tank-mix with 0.75 to 1.33 ounces of Outrider herbicide per acre, or with 0.25 to 1 ounce of Spyder Extra herbicide in 10 to 40 gallons of water per acre. To avoid delays in green-up and minimize injury, apply no more than 1 ounce of Spyder Extra herbicide per acre on bermudagrass and no more than 0.5 ounce on bahiagrass and avoid application when these grasses are in a semi-dormant condition.

DO NOT apply this product in a tank-mix with Outrider or Spyder Extra herbicides on highly maintained bermudagrass and bahiagrass turf, such as on golf courses and lawns.

#### Weed Control in Actively Growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds in actively growing bermudagrass. Some bermudagrass injury could result from the application of this product, but the bermudagrass will recover under moist conditions once the effects of the product wear off. Use only on well-established bermudagrass where some temporary injury or discoloration can be tolerated.

Apply 12 to 36 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Use a lower application rate within this range when controlling annual weeds less than 4 inches tall (or runner length) and increase the rate towards the upper end of the range as weeds increase in size or as they approach flower or seedhead formation. At these application rates, this product will provide partial control of the following perennial weeds in actively growing bermudagrass:

Bahiagrass	Fescue, tall	Trumpetcreeper
Bluestem, silver	Johnsongrass	Vaseygrass

#### PRECAUTION:

- Applying more than 12 fluid ounces of this product per acre on highly maintained bermudagrass, such as on golf courses and lawns, could cause unacceptable turf injury and discoloration.

For a broader weed control spectrum in actively growing bermudagrass, this product may be tank-mixed with Outrider or Spyder Extra herbicides. Apply these tank-mixtures only on well-established bermudagrass where some temporary injury or discoloration

can be tolerated. Make no more than one application of this product in these tank mixtures in the same year, otherwise the bermudagrass could be severely injured.

Apply 6 to 24 fluid ounces of this product per acre in a tank-mix with 0.75 to 1.33 ounces of Outrider herbicide for control or partial control of johnsongrass and other weeds listed on the Outrider herbicide label. Use the higher application rate of both products within the given ranges for control of annual or perennial weeds greater than 6 inches tall.

Apply 12 to 24 fluid ounces of this product per acre in a tank-mix with 1 to 2 ounces of Spyder Extra herbicide per acre for optimal control of weeds listed on the Spyder Extra herbicide label. Use a lower application rate of each product within the given ranges to control annual weeds listed on the labels that are less than 4 inches tall (or runner length) and increase the rates toward the upper end of the ranges as annual weeds increase in size and approach the flower or seedhead stage. This tank-mix will provide partial control of the following perennial weeds in actively growing bermudagrass:

Bahiagrass	Dallisgrass	Fescue, tall	Trumpetcreeper
Bluestem, silver	Dock, curly	Johnsongrass	Vaseygrass
Broomsedge	Dogfennel	Poorjoe	Vervain, blue

**PRECAUTION:**

- Apply these tank mixtures only on well-established bermudagrass where some temporary injury or discoloration can be tolerated.

**RESTRICTION:**

- DO NOT apply this product in a tank mixture with Outrider herbicide or Spyder Extra herbicide on highly maintained bermudagrass, such as on golf courses and lawns.

**Weed Control in Actively Growing Bahiagrass**

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4.5 fluid ounces of this product in 10 to 40 gallons of water per acre 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches prior to seedhead emergence.

For growth suppression of bahiagrass for up to 120 days, apply 3.5 fluid ounces of this product per acre, followed by an application of 1.7 to 3.5 fluid ounces per acre about 45 days later. Make no more than two growth suppression applications per year.

For broad spectrum weed control in actively growing bahiagrass, this product may be tank-mixed with Outrider<sup>®</sup> or Spyder Extra herbicides.

Apply 1.7 to 4 fluid ounces of this product in a tank-mix with 0.75 to 1.33 ounces of Outrider herbicide per acre to control perennial weeds or annual weeds greater than 4 inches in height.

Apply 4.5 fluid ounces of this product in a tank-mix with 0.25 ounce of Spyder Extra herbicide per acre 1 to 2 weeks following an initial spring mowing for optimal control of weeds listed on the Spyder Extra herbicide label in actively growing bahiagrass. Make this application only once per year.

**PRECAUTION:**

- Apply these tank mixtures only on well-established bahiagrass where some temporary injury or discoloration can be tolerated.

**Turf Renovation**

This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding until after determining if any re-growth of underground plant parts will occur. Where repeat applications are necessary, sufficient re-growth must be attained prior to re-application of this product. Summer or fall application provides optimal control of warm-season grasses, such as bermudagrass. For managed turfgrass, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray solution.

This product has no residual soil activity and will not affect plants, seed or sod planted back into the area after application.

A handheld sprayer may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast application or spot treatment using a handheld sprayer may be used to control sod remnants or other unwanted vegetation after sod is harvested.

**PRECAUTIONS:**



- Do not disturb soil or underground plant parts before application of this product.
- Delay tillage and renovation techniques, such as vertical mowing, coring or slicing, a minimum of 7 days after application to allow translocation of this product into underground plant parts.

#### RESTRICTIONS:

- Pre-harvest interval (PHI): If application rates total 2.3 quarts of this product per acre or less, no waiting period between application and feeding or livestock grazing is required.
- Pre-harvest interval (PHI): If the rate is greater than 2.3 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

#### Chemical Mowing

This product may be used to suppress growth of perennial and annual grasses listed in this section to serve as a substitute for mowing.

Perennial Grasses – apply 4.5 fluid ounces of this product per acre to suppress growth of Kentucky bluegrass, or 5.5 fluid ounces to suppress tall fescue, fine fescue, orchardgrass, quackgrass or reed canarygrass in 10 to 40 gallons of spray solution per acre after grasses have greened up to at least 75 percent green color in the spring, or 7 to 10 days after mowing when sufficient re-growth has occurred to provide a desirable height for growth regulation. Use chemical mowing only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

Annual Grasses – apply 3.5 to 4.5 fluid ounces of this product in 10 to 40 gallons of spray solution per acre to suppress growth of some annual grasses, such as annual ryegrass, wild barley and wild oats when actively growing in coarse turf on roadsides or other industrial areas and before the seedheads are in the boot stage of development. This application could injure the desired annual grasses.

#### PRECAUTION:

- Use this product for chemical mowing only in areas where some temporary injury or discoloration of perennial and annual grasses can be tolerated.

### 18.2 Annual Weeds

Annual weeds are easiest to control when they are small and actively growing. New leaf development indicates active growth.

To control or partially control the annual weeds listed in this section when they are less than 6 inches in height or runner length and actively growing, apply 24 fluid ounces of this product per acre. If they are over 6 inches in height or runner length, or slowly growing under stressed conditions, increase the application rate to 1 to 3 quarts per acre, depending on weed height and severity of the poor growing conditions.

For application using a handheld sprayer with a spray-to-wet technique, apply a 0.5-percent solution of this product to annual weeds less than 6 inches in height or runner length prior to seedhead formation in grasses or bud formation in broadleaf weeds. To control annual weeds over 6 inches tall, or even smaller weeds growing under stressed conditions, apply a 0.8- to 1.7-percent solution. Apply the maximum concentration of this product within this range for hard-to-control weeds or weeds over 24 inches tall.

For the control of annual weeds using a handheld controlled droplet applicator (CDA), apply a 20-percent solution of this product at a flow rate of 2 fluid ounces of spray solution per minute and a walking speed of 1.5 miles per hour (1-1/2 pints of spray solution per acre). When using a vehicle-mounted CDA, apply the appropriate amount of this product in 2 to 15 gallons of water per acre.

For optimal control, do not mow, cut, till, burn or disturb vegetation in the application area for a minimum of 3 days after application.

This product has no residual soil activity and does not control emergence of new annual weeds from seed. Subsequent applications of this product will be needed to control weeds that continue to emerge.

#### ANNUAL WEED SPECIES

Anoda, spurred	Foxtail	Ragweed, common
Balsam apple <sup>1</sup>	Foxtail, Carolina	Ragweed, giant
Barley	Geranium, Carolina	Rice, red

Barley, little	Goatgrass, jointed	Rocket, London
Barnyardgrass	Goosegrass	Rocket, yellow
Bassia, fivehook	Groundsel, common	Rye
Bittercress	Henbit	Ryegrass
Bluegrass, annual	Horseweed/Marestail ( <i>Conyza canadensis</i> )	Sandbur, field
Bluegrass, bulbous	Itchgrass	Sesbania, hemp
Brome, downy	Johnsongrass, seedling	Shattercane
Brome, Japanese	Junglerice	Shepherd's-purse
Broomsedge	Knotweed	Sicklepod
Buttercup	Kochia	Signalgrass, broadleaf
Castor bean <sup>2</sup>	Lambsquarters	Smartweed, ladysthumb
Cheatgrass	Lettuce, prickly	Smartweed, Pennsylvania
Cheeseweed ( <i>Malva parviflora</i> )	Mannagrass, eastern	Sorghum, grain (milo)
Chervil	Mayweed	Sowthistle, annual
Chickweed	Medusahead	Spanish needles <sup>3</sup>
Cocklebur	Morningglory ( <i>Ipomoea</i> spp.)	Speedwell, corn
Copperleaf, hophornbeam	Mustard, blue	Speedwell, purslane
Copperleaf, Virginia	Mustard, tansy	Sprangletop
Coreopsis, plains/tickseed	Mustard, tumble	Spurge, annual
Corn	Mustard, wild	Spurge, prostrate
Crabgrass	Nightshade, black	Spurge, spotted
Cupgrass, woolly	Oats	Spurry, umbrella
Dwarf dandelion	Panicum, browntop	Starthistle, yellow
Eclipta	Panicum, fall	Stinkgrass
False dandelion	Panicum, Texas	Sunflower
Falseflax, smallseed	Pennycress, field	Teaweed / Prickly sida
Fiddleneck	Pepperweed, Virginia	Thistle, Russian
Filaree	Pigweed	Velvetleaf
Fleabane, annual	Puncturevine	Wheat
Fleabane, hairy ( <i>Conyza bonariensis</i> )	Purslane, common	Wild oats
Fleabane, rough	Pusley, Florida	Witchgrass

<sup>1</sup> For control of balsam apple, apply this product using handheld equipment only.

<sup>2</sup> Control of castor bean can also be achieved by injecting 4 milliliters of this concentrated (undiluted) product per plant into the lower portion of the main stem.

<sup>3</sup> For control of Spanish needles, apply 48 fluid ounces of this product per acre.

### 18.3 Perennial Weeds

Optimal control of perennial weeds can be obtained when this product is applied when target weeds are small and actively growing. New leaf development indicates active growth. If application of this product must be made to larger weeds or to weeds that are slowly growing under stressful conditions, apply at a rate or spray solution concentration towards the upper end of the specified range.

If weeds have been mowed or tilled, do not apply this product until plants have resumed active growth and have reached the specified stage of growth, or sufficient growth has been achieved to allow for good interception of the spray solution. For optimal control, do not mow, cut, till, burn or disturb vegetation in the application area for a minimum of 7 days after application.

For control of perennial weeds listed on this label using backpack or handheld equipment and a low-volume application technique,

apply a 5- to 8-percent solution of this product over the crown of the target plant to cover 50 percent of the upper plant foliage.

For control of perennial weeds with a handheld controlled droplet applicator (CDA), apply a 20- to 40 percent solution of this product at a flow rate of 2 fluid ounces of spray solution per minute and a walking speed of 0.75 mile per hour (1.5 to 3 quarts of spray solution per acre). When using a vehicle-mounted CDA, apply the required amount of this product, as indicated in the following table, in 2 to 15 gallons of water per acre.

Application of this product in the fall must be made before a killing frost.

This product has no soil activity and does not control emergence of perennial weeds from seed and dormant underground roots, rhizomes or tubers present in the soil at the time of application. More than one application of this product will be necessary for continued control of weeds that emerge following application.

**PERENNIAL WEEDS RATE TABLE**

<b>Perennial Weed Species</b>	<b>Broadcast Rate (quarts/acre)</b>	<b>Handheld Sprayer Concentration (%Solution)</b>
<b>Alfalfa*</b>	1 – 1.7	1.5%
<b>Alligatorweed*</b> Apply this product when most of the target plants are in bloom. More than one application will be needed to achieve control.	3.4	1%
<b>Anise (fennel)</b>	1.5 – 3	1 – 1.5%
<b>Bahiagrass</b>	2.3 – 3.8	1.5%
<b>Beachgrass, European (<i>Ammophila arenaria</i>)</b> Apply a 3.5-percent solution of this product using a spray-to-wet technique or an 8-percent solution using a low-volume application technique. Optimal results are obtained when application is made onto target weeds that are actively growing at the boot through the full-heading stage of development. Make application prior to the loss of more than 50 percent of green leaf color in the fall. Monitor application site and re-apply this product to any target weeds that were missed, if necessary, before re-seeding the area with desirable vegetation. For selective control of European beachgrass, apply a 33.3-percent solution of this product during period of active growth using a wiper applicator. Maximizing the amount of individual leaf tissue contacted by the wiper applicator or making a second pass in the opposite direction will improve control. Avoid contact of the herbicide solution with desirable vegetation.	-	3.5%
<b>Bentgrass</b> This product alone will provide only partial control of bentgrass ( <i>Agrostis</i> spp.). For optimal control, apply 1.8 to 2.4 quarts of this product in a tank-mix with an appropriate rate of Envoy, Fusilade II, Fusion, or Vantage herbicide in a spray volume of 20 to 40 gallons per acre using broadcast application equipment. For optimal control using a handheld sprayer, apply this product at a concentration of 1.7 fluid ounces per gallon of a spray solution in a tank mix with an appropriate amount of Envoy, Fusilade, Fusion, or Vantage herbicide. More than one application might be needed for complete control.	1	1.5%
<b>Bermudagrass</b> Make application when seedheads are present.	3.8	1.5%
<b>Bermudagrass, water (knotgrass)</b>	1	1.5%
<b>Bindweed, field</b> For control, apply 3 to 3.8 quarts of this product per acre as a broadcast application west of the Mississippi River and 2.3 to 3 quarts per acre east of the Mississippi River when bindweed is at or beyond full bloom. For optimal results, apply in late-summer or fall.	2.3 – 3.8	1.5%
<b>Bittersweet, Oriental</b> For control of oriental bittersweet, apply this product as a broadcast spray in 30 to 40 gallons of spray solution per acre. For optimal results, ensure complete coverage of the target plant with the spray solution.	2.3	1.5%
<b>Bluegrass, Kentucky</b> Apply when most target plants have reached the boot to head stage of development. When application is made prior to the boot stage, reduced control can result. In the fall, make application before plants have turned brown.	1.7	1.5%
<b>Blueweed, Texas</b> Apply 3 to 3.8 quarts of this product per acre west of the Mississippi River and 2.7 to 3.4 quarts per acre east of the Mississippi River when most target plants are at or beyond full bloom. For optimal results, apply in late-summer or fall.	3 – 3.8	1.5%
<b>Brackenfern</b> Apply to fully expanded fronds that are at least 18 inches long.	2.3 – 3.4	1%
<b>Bromegrass, smooth</b> Apply this product when most target plants have reached the boot to head stage of development. When application is made prior to the boot stage, reduced control can result. In the fall, make application before plants have turned brown.	1.7	1%
<b>Bursage, woolly-leaf</b>	-	1.5%
<b>Canarygrass, reed</b> Apply this product when most target plants have reached the boot to head stage of development. When application is made prior to the boot stage, reduced control can result. In the fall, make application before plants have turned brown.	1.7 – 2.3	1.5%
<b>Cattail</b> Apply this product when target plants are actively growing and are at or beyond the early to full bloom stage of development. Optimal results are achieved when application is made during the summer or fall months.	2.3 – 3.8	1.5%

<b>Clover; red, white</b>	2.3 – 3.8	1.5%
<b>Cogongrass</b> Apply this product in late-summer or fall when cogongrass is at least 18 inches tall and actively growing. Due to uneven stages of growth and the dense nature of cogongrass vegetation, more than one application might be necessary to achieve control.	2.3 – 3.8	1.5%
<b>Dallisgrass</b>	2.3 – 3.8	1.5%
<b>Dandelion</b>	2.3 – 3.8	1.5%
<b>Dock, curly</b>	2.3 – 3.8	1.5%
<b>Dogbane, hemp</b> Apply this product when most target plants have reached the late-bud to flower stage of growth. For optimal results, make application in late-summer or fall.	3	1.5%
<b>Fescue (except tall)</b>	3.4	1.5%
<b>Fescue, tall</b> Apply this product when most target plants have reached the boot to head stage of growth. If applied prior to the boot stage, less than desirable control might be obtained.	2.3	1.5%
<b>Guineagrass</b> Apply this product when most target plants have at least reached the 7-leaf growth stage.	2.3	1%
<b>Hemlock, poison</b> Control can also be achieved by injecting 5 milliliters of a 5-percent solution of this product using a handheld injection device in one leaf cane per plant, 12 inches above the root crown. <sup>1</sup>	1.5 – 3	1 – 1.5%
<b>Hogweed, giant</b> Inject 5 milliliters of a 5-percent solution of this product into one leaf cane per plant, 12 inches above the root crown. <sup>1</sup>	-	-
<b>Horsenettle</b>	2.3 – 3.8	1.5%
<b>Horseradish</b> Apply this product when most target plants have reached the late-bud to flower stage of development. For optimal results, apply in late-summer or fall.	3.4	1.5%
<b>Horsetail, field</b> Inject 0.5 milliliter of this product per stem directly into the plant stem, one segment above the root crown. <sup>1</sup>	-	-
<b>Iceplant</b>	1.5	1.5 – 2%
<b>Ivy; cape, German</b>	1.5 – 3	1 – 1.5%
<b>Jerusalem artichoke</b>	2.3 – 3.8	1.5%
<b>Johnsongrass</b> Apply this product when most target plants have reached the boot to head stage of development or before plants have turned brown in the fall. When applied prior to the boot stage, reduced control can result.	1.5 – 2.3	1%
<b>Kikuyugrass</b>	1.7 – 2.3	1.5%
<b>Knapweed</b> Apply this product when most target plants have reached the late-bud to flower stage of growth. For optimal results, apply in late-summer or fall.	3.4	1.5%
<b>Knotweed; Bohemian, giant, Japanese</b> Apply 3 quarts of this product per acre as a broadcast application in 3 to 40 gallons of spray solution. For application using a backpack sprayer and a spray-to-wet technique, apply a 2-percent solution of this product. For optimal control, do not disturb vegetation in the application area for a minimum of 7 days after application. Control can also be achieved by cutting stems cleanly just below the 2nd or 3rd node above the ground and immediately apply 10 milliliters of a 50-percent solution of this product in water into the "well" or remaining internode. Ensure that the upper plant material that was removed is gathered and properly discarded to prevent new plants from propagating from sprouting buds. Use of a bio-barrier, such as cardboard, plywood or plastic sheeting, will help guard against the spread of plant material. The combined total application rate of this product must not exceed 6 quarts per acre. <sup>1</sup> Control can also be achieved by injecting 5 milliliters of this product per stem into the second or third internode using a handheld injection device. <sup>1</sup>	3	2%
<b>Lantana</b> Apply this product when most target plants are at or beyond the bloom stage of growth. Use the higher spray solution concentration on plants that have reached the woody stage of growth.	-	1%
<b>Lespedeza</b>	2.3 – 3.8	1.5%
<b>Loosestrife, purple</b> Apply this product when most target plants are at or beyond the bloom stage of growth. Optimal results are achieved when application is made during summer or fall months. Fall application must be made before a killing frost.	2	1 – 1.5%
<b>Lotus, American</b> Apply this product when most target plants are at or beyond the bloom stage of growth. Optimal results are achieved when application is made during summer or fall months. Fall application must be made before a killing frost. More than one application of this product might be necessary to control re-growth of underground plant parts and seeds.	2	0.75%
<b>Milkweed, common</b> Apply this product when most target plants have reached the late-bud to flower stage of growth.	2.3	1.5%
<b>Muhly, wirestem</b> Make application when most target plants are at least 8 inches in height (3- to 4-leaf stage of development) and actively growing.	1.7	1.5%
<b>Mullein, common</b>	2.3 – 3.8	1.5%
<b>Napiergrass</b>	2.3 – 3.8	1.5%
<b>Nightshade, silverleaf</b>	2.3 – 3.8	1.5%

Apply 3 to 3.8 quarts of this product per acre as a broadcast application west of the Mississippi River and 2 to 3 quarts per acre east of the Mississippi River when most target plants are at or beyond full bloom. Optimal results can be obtained when application is made in late-summer or fall after berries have formed.		
<b>Nutsedge; purple, yellow</b> Apply this product to control existing nutsedge plants and attached immature nutlets when target plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and will require repeated application of this product for long-term control.	2.3	1 – 1.5%
<b>Orchardgrass</b> Make application when most target plants have reached the boot to head stage of development. When applied prior to the boot stage, less than desirable control could be obtained. In the fall, make application before plants have turned brown.	1.7	1.5%
<b>Pampasgrass</b>	2.3 – 3.8	1 – 1.5%
<b>Para grass</b> More than one application of this product will be needed to achieve complete control. Allow plants to re-grow to the 7- to 10-leaf stage before making next application.	2.3 – 3.8	1.5%
<b>Pepperweed, perennial</b>	3	1.5%
<b>Phragmites*</b> For partial control of phragmites in Florida and the counties of other states bordering the Gulf of Mexico, apply 3.8 quarts of this product per acre as a broadcast application or a 1.5-percent solution using a handheld sprayer. In other areas of the U.S., apply 2.3 to 3 quarts per acre as a broadcast application or, for partial control, apply a 0.75-percent solution using a handheld sprayer. For optimal results, make application in late-summer or fall when plants are actively growing and in full bloom. Due to the dense nature of this vegetation (which can prevent good spray coverage) and uneven stages of growth, more than one application of this product might be necessary to achieve control. Visual symptoms of control will be slow to develop.	2.3 – 3.8	1 – 1.5%
<b>Quackgrass</b> Apply this product when most target plants are at least 8 inches in height (3- to 4-leaf stage of development) and actively growing.	1.5 – 2.3	1.5%
<b>Redvine*</b>	1.7	1.5%
<b>Reed; common, giant</b> For optimal results make application in late-summer or fall. Control can also be achieved by injecting 5 milliliters of this concentrated (undiluted) product directly into the second or third internode using a handheld injection device. <sup>1</sup>	3 – 3.8	1.5%
<b>Ryegrass, perennial</b> Apply this product when most target plants have reached the boot to head stage of growth. When applied prior to the boot stage, reduced control can result. In the fall, make application before ryegrass turns brown.	1.7 – 2.3	1%
<b>Smartweed, swamp</b>	2.3 – 3.8	1.5%
<b>Spatterdock</b> Make application when most target plants are in full bloom. For optimal results, apply in the summer or fall.	3	0.75%
<b>Sowthistle, perennial</b>	1.7 – 2.3	1.5%
<b>Spurge, leafy*</b>	-	1.5%
<b>Starthistle, yellow</b>	1.7	1.5%
<b>Sweet potato, wild*</b> Make application when most target plants are at or beyond the bloom stage of growth. More than one application will be needed to achieve control.	-	1.5%
<b>Thistle, artichoke</b> Make application when target plants are at or beyond the bud stage of growth.	1.5 – 2.3	1 – 1.5%
<b>Thistle, Canada</b> Make application when target plants are at or beyond the bud stage of growth. Control can also be achieved by stem-injection. Cut 8 to 9 of tallest plants in a clump at bud stage. Push a cavity needle into the stem center and then slowly remove it as you inject 0.5 milliliter of this concentrated (undiluted) product into the stem. <sup>1</sup>	1.7 – 2.3	1.5%
<b>Timothy</b> Make application when most target plants have reached the boot to head stage of development. If application is made prior to the boot stage, reduced control can result. In the fall, make application before plants turn brown.	1.7 – 2	1.5%
<b>Torpedograss*</b>	3 – 3.8	1.5%
<b>Trumpetcreeper*</b>	1.7 – 2.3	1.5%
<b>Tules, common</b> Make application to target plants at or beyond the seedhead stage of development. Visual symptoms will be slow to appear and might not appear for 3 or more weeks after application.	-	1.5%
<b>Vaseygrass</b>	2.3 – 3.8	1.5%
<b>Velvetgrass</b>	2.3 – 3.8	1.5%
<b>Wheatgrass, western</b> Make application when most target plants have reached the boot to head stage of development. Application made prior to the boot stage could result in reduced control. In the fall, make application before plants turn brown.	1.7 – 2	1.5%

\* Partial control

<sup>1</sup> When using stem injection, the combined total use of this product must not exceed 8 quarts per acre per year. At 5.5 milliliters of concentrated (undiluted) product per stem, 8 quarts will treat approximately 1300 stems per acre per year. The number of stems that can be treated per acre will vary depending on the injection volume and the concentration of this product in the application solution.

#### 18.4 Woody Brush, Trees and Vines

Apply this product to brush and trees that are actively growing after full leaf expansion, unless otherwise directed. Use the higher application rates within a given range for larger brush and trees and/or application in areas of dense vegetative growth. For control of vines, apply this product at the higher application rate or spray solution concentration within the given range when target plants have reached the woody stage of growth.

Optimal control of woody brush and trees is obtained when application is made in late-summer or fall after fruit formation; however, in arid areas, optimal control can be obtained when application is made in the spring to early-summer when brush and trees are at high moisture content and flowering. Poor control can be expected when this product is applied to drought-stressed brush and trees.

Some autumn color on undesirable deciduous species is acceptable when applying this product to brush and trees in the fall, provided no major leaf drop has occurred. Reduced performance of this product could result if application is made following a frost. Symptoms might not appear prior to frost or senescence following a fall application.

For optimal results, allow 7 or more days after application before mowing, cutting, tilling, burning or removal of woody brush, trees and vines from the application site. Additional applications of this product will be required to control brush and trees regenerating from underground parts or seed.

**TANK MIXTURES:** This product may be applied at any rate stated on this label in a tank mixture with the following products to increase the spectrum of control of herbaceous weeds, woody brush, trees and vines. For control of herbaceous weeds, apply the tank-mix product at the lower end of the given application rate or spray solution concentration range. For control of dense stands or hard-to-control woody brush, trees and vines, increase the application rate or spray solution concentration of the tank-mix product towards the higher end of the range. Refer to the individual product labels for approved uses and application rates.

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[imazapyr; metsulfuron methyl; triclopyr]

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Ensure that the proper amount of Tahoe is thoroughly mixed with water in the spray tank before adding this product.

#### Cut Stump Application

This product may be used to control re-growth and re-sprouting of woody brush and trees on any site listed on this label.

Cut the woody brush or tree close to the soil surface and immediately apply a 50- to 100-percent (undiluted) solution of this product to the freshly-cut surface using an applicator capable of applying this product to the entire cambium. A delay in application could result in reduced performance. For optimal results, cut the woody brush or tree during period of active growth and full leaf expansion and apply this product.

For control of the Tree of Heaven (*Ailanthus altissima*), cut the tree close to the soil surface and immediately apply a 50-percent solution of this product (16 fluid ounces per quart of solution) and 10 percent Polaris herbicide (3 to 4 fluid ounces per quart of solution) in water to the freshly-cut surface.

**DO NOT MAKE A CUT STUMP APPLICATION WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MIGHT BE GRAFTED TO THE ROOTS OF THE CUT STUMP, AS INJURY COULD OCCUR IN THE ADJACENT TREES.** Some sprouts, stems, or trees can share a common root system. Adjacent trees having a similar age, height and spacing could be an indicator of a shared root system. Whether grafted or shared, injury is likely to occur to adjacent stems or trees when this product is applied to one or more trees sharing a common root system.

#### Woody Brush and Tree Injection and Frill Application

This product may be used to control woody brush and trees listed in this section by injection or frill application on any site listed on this label.

Inject or apply the equivalent of 1 milliliter (0.04 fluid ounce) of this product for every 2 to 3 inches of trunk diameter at breast height (DBH). If injecting this product into the woody brush or tree, use equipment capable of penetrating into the living plant tissue under the bark.

For frill application, apply a 50- to 100-percent (undiluted) solution of this product in water to either a continuous frill around the tree or to cuts evenly spaced around the tree below all branches. As tree diameter increases, optimal results can be achieved by applying this product to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow runoff of this product to occur from frilled or cut areas. In species that freely exude sap, make the frill or cuts at an oblique angle to produce a cupping effect and apply this concentrated product undiluted. For optimal results, make this application during period of active growth and after full leaf expansion.

#### Modified High-Volume and Low-Volume Backpack Application

For control and partial control of woody bush, trees and vines listed on this label when using a backpack sprayer or other handheld equipment and a directed low-volume foliar application technique, apply a 5- to 9-percent solution of this product evenly over the plant crown to cover 50 percent of the upper foliage of undesirable woody brush, trees and vines.

**WOODY BRUSH, TREES AND VINES RATE TABLE**

<b>Species</b>	<b>Broadcast Rate (quarts/acre)</b>	<b>Handheld Sprayer Concentration (%Solution)</b>
<b>Alder</b>	2.3 – 3.4	1%
<b>Ash *</b>	1.7 – 3.8	1 – 1.5%
<b>Aspen, quaking</b>	1.7 – 2.3	1%
<b>Bearmat (Bearclover) *</b>	1.7 – 3.8	1 – 1.5%
<b>Beech *</b>	1.7 – 3.8	1 – 1.5%
<b>Birch</b>	1.7 – 2.3	1%
<b>Blackberry</b>	2.3 – 3.5	1%
<b>Blackgum</b>	1.7 – 3.8	1 – 1.5%
<b>Bracken</b>	1.7 – 3.8	1 – 1.5%
<b>Broom; French, Scotch</b>	1.5 – 3.8	1 – 1.5%
<b>Buckwheat, California *</b>	1.5 – 3.8	1 – 1.5%
<b>Cascara *</b>	1.7 – 3.8	1 – 1.5%
<b>Castorbean</b> Also for control, inject 4 milliliters of this concentrated (undiluted) product per plant directly into the lower portion of the main stem using a handheld injection device. <sup>1</sup>		
<b>Catsclaw<sup>1</sup></b>	-	1%
<b>Ceanothus *</b>	1.7 – 3.8	1 – 1.5%
<b>Chamise *</b>	1.5 – 3.8	1%
<b>Cherry; bitter, black, pin</b>	1.7 – 2.3	1%
<b>Coyote brush</b> For control, apply this product when at least 50 percent of the new leaves are fully developed.	2.3 – 3	1 – 1.5%
<b>Deerweed</b>	1.5 – 3.8	1%
<b>Dogwood *</b>	1.7 – 3.8	1 – 1.5%
<b>Elderberry</b>	1.7 – 2.3	1%
<b>Elm *</b>	1.7 – 3.8	1 – 1.5%
<b>Eucalyptus</b> For control of eucalyptus re-sprouts, apply this product using a handheld sprayer when re-sprouts are 6 to 12 feet tall. Ensure complete coverage.	-	1.5%
<b>Gallberry</b>	1.7 – 3.8	1 – 1.5%
<b>Gorse *</b>	1.7 – 3.8	1 – 1.5%
<b>Hackberry, western</b>	1.7 – 3.8	1 – 1.5%
<b>Hasardia*</b>	1.5 – 2.8	1 – 1.5%
<b>Hawthorn</b>	1.7 – 2.3	1%
<b>Hazel</b>	1.7 – 2.3	1%
<b>Hickory *</b>	1.7 – 3.8	1 – 1.5%
<b>Honeysuckle</b>	2.3 – 3.4	1%
<b>Hornbeam, American *</b>	1.7 – 3.8	1 – 1.5%
<b>Ivy, poison</b>	2.8 – 3.8	1.5%
<b>Kudzu</b>	2.8 – 3.8	1.5%
<b>Locust, black *</b>	1.7 – 3.4	1 – 1.5%
<b>Madrone re-sprouts *</b>	-	1.5%
<b>Manzanita *</b>	1.7 – 3.8	1 – 1.5%



<b>Maple, red</b>	1.7 – 3.4	1%
For control, apply a 1-percent solution of this product using a handheld sprayer when leaves are fully developed. For partial control, apply 1.7 to 3.4 quarts per acre as a broadcast application.		
<b>Maple, sugar</b>	-	1%
For control, apply this product using a handheld sprayer when at least 50 percent of the new leaves are fully developed.		
<b>Maple, vine*</b>	1.7 – 3.8	1 – 1.5
<b>Monkey flower *</b>	1.5 – 3	1 – 1.5%
<b>Oak; black, white *</b>	1.7 – 3.4	1 – 1.5%
<b>Oak; northern, pin</b>	1.5 – 3	1%
For control, apply this product when at least 50 percent of the new leaves are fully developed.		
<b>Oak, poison</b>	2.8 – 3.8	1.5%
Repeat applications might be required to maintain control. Application in the fall must be made before leaves lose green color.		
<b>Oak, post</b>	2.3 – 3.4	1%
<b>Oak, red</b>	-	1%
For control, apply this product using a handheld sprayer when at least 50 percent of the new leaves are fully developed.		
<b>Oak, scrub*</b>	1.5 – 3	1%
<b>Oak, southern red</b>	1.7 – 2.3	1%
<b>Orange, Osage</b>	1.4 – 3.8	1 – 1.5%
<b>Peppertree, Brazilian (Florida holly)*</b>	1.5 – 3.8	1 – 1.5%
<b>Persimmon *</b>	1.7 – 3.8	1 – 1.5%
<b>Pine</b>	1.7 – 3.8	1 – 1.5%
<b>Poplar, yellow *</b>	1.7 – 3.8	1 – 1.5%
<b>Redbud, eastern</b>	1.7 – 3.8	1 – 1.5%
<b>Rose, multiflora</b>	1.7	1%
Make application prior to leaf deterioration by leaf-eating insects.		
<b>Russian olive *</b>	1.7 – 3.8	1 – 1.5%
<b>Sage, black</b>	1.5 – 3	1%
<b>Sage, white *</b>	1.7 – 3	1 – 1.5%
<b>Sagebrush, California</b>	1.5 – 3	1 – 1.5%
<b>Salmonberry</b>	1.7 – 2.3	1%
<b>Saltcedar *</b>	1.7 – 3.8	1 – 1.5%
For partial control, apply a 1- to 1.5-percent solution of this product using a handheld sprayer or 1.7 to 3.8 quarts per acre as a broadcast application. For control, apply a 1- to 1.5-percent solution of this product with 0.25 percent by volume Arsenal herbicide (one-third of an ounce per gallon) using a handheld sprayer. For control using broadcast application, apply 1.5 quarts of this product per acre in a tank-mix with 16 fluid ounces of Arsenal herbicide to plants less than 6 feet tall. To control saltcedar greater than 6 feet tall using broadcast application, apply 3 quarts of this product per acre in a tank-mix with 1 quart of Arsenal herbicide.		
<b>Sassafras *</b>	1.7 – 3.8	1 – 1.5%
<b>Sourwood *</b>	1.7 – 3.8	1 – 1.5%
<b>Sumac; laurel, poison, smooth, sugarbrush, winged *</b>	1.7 – 3.4	1 – 1.5%
<b>Sweetgum</b>	1.7 – 2.3	1%
<b>Swordfern *</b>	1.7 – 3.8	1 – 1.5%
<b>Tallowtree, Chinese</b>	-	1%
<b>Tan oak re-sprouts *</b>	-	1.5%
<b>Thimbleberry</b>	1.7 – 2.3	1%
<b>Tobacco, tree *</b>	1.7 – 2.8	1 – 1.5%
<b>Toyon*</b>	-	1.5%
<b>Trumpet creeper</b>	1.7 – 2.3	1%
<b>Virginia creeper</b>	1.7 – 3.8	1 – 1.5%
<b>Waxmyrtle, southern *</b>	1.7 – 3.8	1 – 1.5%
<b>Willow</b>	2.3 – 3.4	1%
<b>Yerba santa, California*</b>	-	1.5%

\* Partial control

## 19.0 STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**PESTICIDE STORAGE:** STORE ABOVE 10°F (-12°C) TO KEEP PRODUCT FROM CRYSTALLIZING. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68°F (20°C) for several days to redissolve and shake or roll to mix well before using.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed must be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures. Emptied container retains vapor and product residue. Observe all label safeguards until container is destroyed.



**CONTAINER HANDLING:**

**[Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "No refillable" or "Refillable" designation. Follow the container handling instructions below that apply to your container type / size."

**[Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

**[Nonrefillable Containers 5 Gallons or Less:]** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by State and local authorities.

**[Nonrefillable Containers Larger than 5 Gallons:]** Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by State and local authorities.

**[Refillable Containers Larger than 5 Gallons:]** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container.

Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**20.0 WARRANTY DISCLAIMER**

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