

# OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

January 11, 2024

Mary Beth Endres Regulatory Manager Axion AG Products, LLC 1880 Fall River Drive, Suite 100 Loveland, CO 80538

Subject: Label Amendment – Updating label to reflect 100% repack

Product Name: AX-GLY 2X

EPA Registration Number: 89167-47 Application Date: June 1, 2021

Case Number: 482298

Dear Mary Beth Endres:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing 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 copy of the final printed labeling before you release the 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 the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or

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claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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

If you have any questions, please contact Jamie Millard at (202) 566-2726 or by email at millard.jamie@epa.gov.

Emily Schmid

Emily Schmid, Product Manager 25

Herbicide Branch

Registration Division (7505P)

Office of Pesticide Programs

**Enclosure** 

# ACCEPTED

1/11/2024

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

89167-47

GLYPHOSATE GROUP 9 HERBICIDE

# **AX-GLY 2X**

## Non-Selective Herbicide

ACTIVE INGREDIENTS:	%BY WT
Glyphosate, N-(phosphonomethyl) glycine, in the form of its isopropylamine salt*	30.94%
Glyphosate, N-(phosphonomethyl) glycine, in the form of its potassium salt**	22.99%
OTHER INGREDIENTS:	46.07%
TOTAL:	100.00%

Equivalent to 540 grams per liter or 4.5 pounds per U.S. gallon glyphosate acid.

# KEEP OUT OF REACH OF CHILDREN CAUTION / PRECAUCIÓN

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

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

[SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS.]
[See inside booklet for additional Precautionary Statements and Directions for Use.]

EPA Reg. No.: 89167-47				EPA Est. No.:		
	Net Contents:	Gal. (	L)			

Manufactured for:
AXION AG PRODUC

AXION AG PRODUCTS, LLC 1880 Fall River Drive, Suite 100 Loveland, CO 80538

010924

<sup>\*</sup>Contains 400 grams per liter or 3.33 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 297 grams per liter or 2.5 pounds per U.S. gallon glyphosate acid.

<sup>\*\*</sup> Contains 297 grams per liter or 2.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 243 grams per liter or 2.0 pounds per U.S. gallon glyphosate acid.

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS KEEP OUT OF REACH OF CHILDREN **CAUTION**

Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing.

#### **FIRST AID**

#### IF IN EYES

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

#### HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 or your poison control center at 1-800-222-1222.

For Chemical Spill, Leak, Fire or Exposure, call CHEMTREC 800-424-9300.

**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 may 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.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE):

Mixers, loaders, applicators and other handlers must wear: long-sleeved shirt and long pants, socks and shoes, and chemical-resistant gloves made of barrier laminate, nitrile rubber ≥ 14 mils, butyl rubber ≥ 14 mills, or Viton ≥ 14 mils.

[OR the following alternate PPE requirements may be substituted:

Mixers, loaders, other handlers and applicators, when handling this concentrated product or its application solutions of 30 percent concentration or greater, must wear: long-sleeved shirt and long pants, shoes, socks, any waterproof gloves.

Applicators, when handling spray solutions where concentration of this product is less than 30 percent, must wear: long-sleeved shirt and long pants, shoes, and socks.]

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

#### **Engineering Controls**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.607)(d-f)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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

## **USER SAFETY RECOMMENDATIONS**

#### **Users Should:**

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

## **ENVIRONMENTAL HAZARDS**

DO NOT apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. DO NOT contaminate water when cleaning equipment or disposing of equipment washwaters and rinsate.

#### PHYSICAL OR CHEMICAL HAZARDS

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, 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 may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

#### 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.]

#### 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, wear: coveralls, shoes plus socks and waterproof gloves.

#### 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.

#### PRODUCT INFORMATION

**Product Description:** This product is a post-emergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label directions.

[Optional label text: **DO NOT** add [Optional label text: surfactants, additives containing surfactants,] buffering agents or pH adjusting agents to the pray solution when this product is the only pesticide being applied unless otherwise directed. See the "MIXING" section of this label for instructions regarding other additives.]

[Optional 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, unless otherwise directed.]

**Time to Symptoms:** This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and

yellowing of the plant, which advances to complete browning of above-ground growth and deterioration of underground plant parts.

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

**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.

**Spray Coverage:** For enhanced, spray coverage should be uniform and complete. **DO NOT** spray weed foliage to the point of run-off.

**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.

**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 5.3 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 7 quarts (8 pounds of Glyphosate acid) per acre per year.

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

# WEED RESISTANT MANAGEMENT

GLYPHOSATE GROUP 9 HERBICIDE

For resistance management, this product is a Group 9 herbicide. Any weed population may contain or develop plants naturally resistant to this product 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.

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 the 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 before and 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 are by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistancemanagement and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact AXION AG PRODUCTS, LLC at 844-425-8488.

## **Management of Glyphosate-Resistant Biotypes**

Appropriate testing is needed to determine if a weed is resistant to glyphosate. Contact your local sales representative, crop advisor, or extension agent to determine if resistance in any particular weed biotype has been confirmed in your area, or visit on the Internet www.weedresistancemanagement.com or www.weedscience.org.

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.

## **Integrated Pest (Weed) Management**

This product may be integrated into an overall weed pest management strategy whenever the use of an herbicide is required. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) should be followed wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

#### **MIXING**

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

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.

RESTRICTION: **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.

#### Mixing with Water

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.

PRECAUTIONS: 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.

#### **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 registered for the same use and timing, 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. Axion 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.

For enhanced results, apply tank mixtures with this product at a minimum spray volume rate of 10 gallons per acre.

#### 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. Mix labeled tank mixtures of this product with water as follows:

- 1. Place a 20- to 35-mesh screen or wetting basket over filling port.
- 2. Through the screen, fill the spray tank one-half full with water and start agitation.
- 3. If ammonium sulfate is used add it slowly through the screen into the tank. Continue agitation. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding other products.
- 4. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
- 5. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
- 6. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
- 7. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
- 8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift reduction additive and water soluble liquid.

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.

# **Mixing Spray Solution Concentrates**

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

## **Spray Solution Table:**

Desired			Amount of	this product		
Volume	0.4%	0.7%	1%	1.5%	4%	7%
1 gal	0.5 oz	0.9 oz	1.3 oz	2 oz	5 oz	9 oz
25 gal	0.8 pt	0.7 qt	1 qt	1.5 qt	4 qt	7 qt
100 gal	1.6 qt	2.8 qt	1 gal	1.5 gal	4 gal	7 gal

2 tablespoons = 1 fluid ounce

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.

## **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 16 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% (1 to 2 quarts per 100

gallons of spray solution) when adding surfactant that contains at least 70% active ingredient, or a 1% surfactant concentration (4 quarts per 100 gallons of spray solution) when adding surfactant that contains less than 70% active ingredient. Read and carefully observe all precautionary statements and other information on the surfactant label.

[Optional label statement: **DO NOT** add buffering agents or pH adjusting agents to the spray solution when this product is the only pesticide product being applied.]

**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 Flex cotton or glyphosate-resistant cotton.

## **Ammonium Sulfate**

Unless otherwise directed, the addition of 1 to 2% 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.

# **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.

#### **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, 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.

#### **APPLICATION EQUIPMENT AND TECHNIQUES**

Apply this product with the following application equipment:

Aerial—Fixed Wing and Helicopter

**Ground**—Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

**Hand-Held or High-Volume Spray Equipment**—Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other hand-held 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 Equipment**—Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

**Injection Systems**—Aerial or ground injection sprayers.

**Controlled Droplet Applicator (CDA)**—Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

Apply these spray solutions in properly maintained and calibrated equipment capable of delivering desired volumes.

RESTRICTIONS: **DO NOT** apply this product through any type of irrigation system.

# **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 44 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.

#### 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 ROUNDUP READY AND OTHER GLYPHOSATE RESISTANT CROPS,] AS SEVERE PLANT INJURY OR DESTRUCTION COULD RESULT.

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

AVOID APPLYING THIS PRODUCT AT EXCESSIVE SPEED OR SPRAYER PRESSURE.

#### **AERIAL SPRAY DRIFT MANAGEMENT**

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

- 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 observed.

## 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 applications are made improperly, or under unfavorable environmental conditions (see the "Wind", "Temperature and Humidity" and "Temperature Inversions" sections of this label).

## **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:** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing 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 may further reduce drift without reducing swath width.
- **Application height:** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

#### **Swath Adjustment**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller droplets, etc.).

#### Wind

Drift potential is lowest between wind speeds of 2 to 10 miles per hour. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided 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 applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

# **Temperature Inversions**

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

The product must only be applied 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

## FOR AERIAL APPLICATION IN CALIFORNIA ONLY

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.

PRECAUTIONS: 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.

RESTRICTIONS: **DO NOT** apply this product using aerial application equipment in residential areas. This product, when tank-mixed with dicamba, may not be applied by air in California.

# 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 from February 15 through March 31 within the following boundaries in Freson County, California

North: Fresno County line

East: State Highway 99

South: Fresno County line

West: Fresno County line

Observe the following directions to minimize off-site movement during aerial application of this herbicide. 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

For additional information on the proper aerial application of this product in Fresno County, call [insert appropriate contact number].

## FOR AERIAL APPLICATION IN ARKANSAS ONLY

Apply this product at the appropriate rate of 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 are specified.

Applications should typically 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.

**DO NOT** use nozzles with wide-angle discharge.

**DO NOT** apply this product when winds are in excess of 10 mph.

**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 may occur when wind speeds are less than 2 mph.

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

- 1. **DO NOT** apply within 100 feet of any desirable vegetation or crops.
- 2. If wind up to 5 mph is blowing toward desirable vegetation or crops, **DO NOT** apply within 500 feet upwind of the desirable vegetation or crops.
- 3. Winds blowing from 5 to 10 mph toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

PRECAUTIONS: 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.

#### **Ground Application Equipment**

Use the listed rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the listed range to ensure complete coverage. Use nozzles that will avoid generating a fine mist. For enhanced results with ground application equipment, use flat spray nozzles. Check for even distribution of spray droplets.

# **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 certain 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.

## **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.

PRECAUTIONS: Avoid contact of this herbicide with desirable vegetation. Contact of this product with desirable vegetation could result in unwanted plant damage or destruction.

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

A shielded sprayer directs the herbicide solution to the target weeds while protecting the crop or other desirable vegetation from coming into contact with 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. **DO NOT** operate 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. Enhanced 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. Enhanced results with a wiper applicator can be obtained when two applications are made travelling in opposite directions in the field.

Keep wiper surfaces clean.

PRECAUTIONS: 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.

RESTRICTIONS: **DO NOT** apply this product using a wiper applicator when weeds are wet. [Optional statement: **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 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.

#### **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.

# **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.

# ANNUAL AND PERENNIAL CROPS

**NOTE**: THIS SECTION GIVES DIRECTIONS THAT APPLY TO ALL LISTED CROPS WITHIN THE FOLLOWING SECTIONS. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See the "ROUNDUP READY OR GLYPHOSATE RESISTANT CROPS" section of this label or separately published Supplemental Labeling for instructions for treating Roundup Ready or glyphosate resistant crops. TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, At-Planting, Hooded Sprayers in Row-Middles, Shielded Sprayers in Row-Middles, Wiper Applications in Row-Middles, Post-Harvest.

USE INSTRUCTIONS: Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or preemergent to annual and perennial crops listed in this label, except where specifically limited. For any crop not listed in this label, applications must be made at least 30 days prior to planting. Unless otherwise directed, apply this product according to the rates listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH, TREES AMD VINES RATE TABLES" in this label. Repeat applications may be made up to a maximum of 5.3 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 equipment capable of preventing all crop contact with herbicide solutions 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 registered for the same use and timing to provide residual weed control, a broader weed control spectrum or an alternate mechanism of action. 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.

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. AXION AG PRODUCTS, LLC 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. 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.

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 other 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.

**DO NOT** harvest or feed vegetation from an area for 8 weeks following broadcast postemergence application, unless otherwise directed.

#### **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 APPLICATIONS: Those listed in the "ANNUAL AND PERENNIAL CROPS" section plus the following: Red Rice Control Prior to Planting Rice, Spot Treatment (except Rice), Control of Barnyardgrass in Rice Using Renovation Treatment (California only) Over-the-Top Wiper Applications (Feed Barley and Wheat Only), Preharvest (Feed Barley and Wheat Only).

## Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after 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 32 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.

PRECAUTIONS: Avoid spraying during low humidity conditions, as reduced control may result.

RESTRICTIONS: **DO NOT** treat rice fields or levees when the fields contain floodwater. **DO NOT** re-flood treated fields for 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.

RESTRICTIONS: **DO NOT** treat 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 (*Echinochola 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 within a field.

RESTRICTIONS: Rice straw and stubble from the application area plus an additional 25 feet on all sides of the area may not be used for animal bedding, grazing, or any other feed purpose. **DO NOT** make this application using aerial application equipment.

# Wiper Applications (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 at least 35 days between application and harvest. **DO NOT** use roller applicators.

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

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of wheat or feed barley. For wheat, apply after the hard-dough stage of grain (30 percent or less grain moisture). For feed barley, apply after the hard-dough stage and when the grain contains 20 percent moisture 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 22 fluid ounces of this product per acre per application. Allow 7 days between application and harvest or grazing.

#### Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with other herbicides registered for the same use and timing may be used.

RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation within the application area. Application must be made a minimum of 30 days prior to planting any crop not listed on this label.

#### CORN

**TYPES OF CORN:** Field corn, Seed corn, Silage corn, Sweet corn, Popcorn.

**TYPES OF APPLICATIONS:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section plus the following: Spot Treatment, Preharvest. For Roundup Ready or glyphosate resistant corn, see the "ROUNDUP READY OR GLYPHOSATE RESISTANT CROPS" section of this label.

## Preplant, Preemergence, At-Planting

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

TANK MIXTURES: This product may be tank-mixed with other herbicides registered for the same use and timing. 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. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

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 this product at 22 fluid ounces per acre in these tank mixtures. For other annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.

RESTRICTIONS: Applications of 2.4-D or dicamba must be made at least 7 days prior to planting corn.

For Southern states, **DO NOT** apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. The area covered by these rates include from Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

# **Hooded Sprayers**

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used. See additional

instructions for 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 22 fluid ounces of this product per acre for each hooded sprayer application and no more than 64 fluid ounces per acre per year total.

#### **Spot Treatment**

USE INSTRUCTIONS: For spot treatments, apply this product prior to silking of corn.

RESTRICTIONS: **DO NOT** treat more than 10 percent of the total field area to be harvested.

#### **Preharvest**

USE INSTRUCTIONS: Up to 64 fluid ounces of this product per acre may be applied using ground application equipment, or up to 44 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.

RESTRICTIONS: 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, which were growing in the crop at the time of harvest. This product may be tank-mixed with other herbicides registered for the same use and timing. 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.

RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

#### COTTON

TYPES OF APPLICATIONS: Those listed in the "ANNUAL AND PERENNIAL CROPS" section plus the following: Selective Equipment, Spot Treatment, Preharvest.

For Roundup Ready or glyphosate resistant cotton, see the "ROUNDUP READY OR GLYPHOSATE RESISTANT CROPS" section of this label.

#### Preplant, Preemergence, At-Planting

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 Dicamba applied prior to planting only. This product may be tank-mixed with other herbicides registered for the same use and timing. 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. Apply these tank mixtures in 10 to 20 gallons of water per acre.

## **Selective Equipment**

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

RESTRICTIONS: Allow a minimum of 7 days between application and harvest.

# **Spot Treatment**

USE INSTRUCTIONS: For spot treatments, apply this product prior to boll opening of cotton.

RESTRICTIONS: **DO NOT** treat more than 10 percent of the total field area to be harvested.

#### **Preharvest**

USE INSTRUCTIONS: This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" sections of this label. For cotton regrowth inhibition, apply 16 to 44 fluid ounces of this product per acre. Make preharvest application only after sufficient bolls have developed to produce the desired yield. Application prior to this time could affect maximum yield potential.

TANK MIXTURES: This product may be tank mixed with other herbicides registered for the same use and timing to provide additional enhancement of cotton leaf drop. 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.

RESTRICTIONS: 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 cotton.

#### **FALLOW SYSTEMS**

This product may be applied during the fallow period prior to planting or emergence of any listed crop on this label.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Aid-to-Tillage.

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

#### **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. This product may be tank mixed with other herbicides registered for the same use and timing for a broader weed control spectrum. Aerial application of up to 44 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.

PRECAUTIONS: 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", "PERENNIAL WEEDS" and "WOODY BRUSH, TREES AND VINES RATE TABLES" sections of this label.

TANK MIXTURES: Apply 8 fluid ounces of this product per acre in a tank-mix with an appropriate rate of Oxyfluorfen to control the following weeds with the maximum height or length indicated: 3 inches—common cheeseweed, chickweed, groundsel; 6 inches—London rocket, shepherd's-purse.

Apply 11 fluid ounces of this product per acre in a tank-mix with an appropriate rate of Oxyfluorfen to control the following weeds with 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 preplant to labeled crops to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 8 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 practices no later than 15 days after treatment and before regrowth occurs. Allow at least 1 day after application before tillage.

PRECAUTIONS: Tank mixtures with residual herbicides may result in reduced performance of this product.

## **GRAIN SORGHUM (MILO)**

TYPES OF APPLICATIONS: Those listed in the "ANNUAL AND PERENNIAL CROPS" section plus the following: Spot Treatment, Wiper Applications, Preharvest.

## Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in tank mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.

TANK MIXTURES: This product may be tank-mixed with other herbicide products registered for the same use and timing. 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. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

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 22 fluid ounces of this product per acre in a tank mixture with a herbicide registered for the same use and timing. For control of other annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces per acre when weeds are over 6 inches tall in a tank mix with labeled rate of other herbicide products registered for the same use and timing. When using nitrogen solutions as the carrier, the use rate may need to be increased for acceptable weed control.

# **Spot Treatment, Wiper Applications**

USE INSTRUCTIONS: This product may be applied as a spot treatment in grain sorghum. 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 EQUIMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: For spot treatment, **DO NOT** treat this product to more than 10 percent of the total field area to be harvested. When applied using a wiper applicator, allow a minimum of 40 days between application and harvest. **DO NOT** use roller applicators. Do not feed or graze treated milo fodder or ensile vegetation within the application area.

#### **Hooded Sprayers**

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 applications of this product through hooded sprayers. **DO NOT** apply more than 22 fluid ounces of this product per acre per hooded prayer application and no more than 64 fluid ounces per acre per year.

#### **Preharvest**

USE INSTRUCTIONS: Up to 44 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: 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 rates may be required for control of large weeds which were growing in the crop at the time of harvest. This product may be tank-mixed with other herbicides registered for the same use and timing. 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 may be applied to grain sorghum stubble following harvest to suppress or control regrowth. Apply 22 fluid ounces of this product per acre for control, or 16 fluid ounces of this product per acre for suppression.

RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation within the application area. Application must be made a minimum of 30 days prior to planting of any crop not listed on this label.

#### **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 APPLICATIONS: Those listed in the "ANNUAL AND PERENNIAL CROPS" section plus Wiper Applications (Peppermint and Spearmint Only), Spot Treatment (Peppermint and Spearmint Only).

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 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.

## Wiper Applications or Spot Treatment (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: Allow at least 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.

#### **OIL SEED 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; Rape; Rose hip; Safflower; Sesame; Stokes aster; Sunflower; Sweet rocket; Tallowwood; Tea oil plant; Vernonia

For directions for use with Roundup Ready or glyphosate resistant canola see the "ROUNDUP READY OR GLYPHOSATE RESISTANT CROPS" section of this label.

TYPES OF APPLICATION: Those listed under "ANNUAL AND PERENNIAL CROPS - TYPES OF APPLICATIONS" section above 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 5.3 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 (per acre)			
Safflower			
Combined total for all Preemergence and Selective Equipment applications	64 fluid ounces		
Preharvest application 64 fluid ounces			
Sunflower			
Combined total for all Preemergence and Selective Equipment applications	22 fluid ounces		
Preharvest application 22 fluid ounces			
All Other Oilseed Crops Listed (Except Buffalo Gourd)			
Combined total for all Preemergence and Selective Equipment applications	44 fluid ounces		
Preharvest application	32 fluid ounces		

RESTRICTIONS: **DO NOT** exceed a total application rate of 5.3 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 may be applied before, during or after planting into conventionally tilled soil, a cover crop, established sod or previous crop residue. 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.

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 64 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 22 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 32 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 and allow a minimum of 7 days between application and harvest or feeding to livestock. 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 Roundup Ready or glyphosate resistant 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. This product may be tank mixed with other herbicide products registered for the same use and timing. 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.

RESTRICTIONS: **DO NOT** exceed a total application rate of 5.3 quarts of this product per acre per year. Allow a minimum of 7 days between application of this product and harvest or 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.

#### **SOYBEANS**

TYPES OF APPLICATIONS: Those listed in the "ANNUAL AND PERENNIAL CROPS" section plus Spot Treatment, Preharvest, Selective Equipment.

For Roundup Ready or glyphosate-resistant soybeans and Roundup Ready 2 Yields soybean, see the "ROUNDUP READY OR GLYPHOSATE-RESISTANT CROPS" section of this label.

#### Preplant, Preemergence, At-Planting

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

TANK MIXTURES: This product may be tank-mixed with 2,4-D or Dicamba and applied prior to planting only. This product may also be tank-mixed with other herbicide products registered for the same use and timing. 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. Apply these tank mixtures in 10 to 20 gallons of water per acre

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 this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 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 soybeans. RESTRICTIONS: **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 applicator, 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.

RESTRICTIONS: 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 3.3 quarts per acre of this product per acre for preharvest applications using ground equipment or more than 44 fluid ounces per acre using aerial application equipment. Allow a minimum of 7 days between application and harvest of soybeans. If the preharvest application rate is greater than 22 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 22 fluid ounces per acre or less, the grazing restriction is reduced to 14 days after application.

#### **SUGARCANE**

TYPES OF APPLICATIONS: Those listed in the "ANNUAL AND PERENNIAL CROPS" section plus Spot Treatment.

#### Preplant, Preemergence, At-Planting

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

RESTRICTIONS: **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, make a 1 percent solution of this product in water using a handheld sprayer and a spray-to-wet technique. Enhanced 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.

#### **Fallow Treatments**

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. For removal of last stubble of ratoon cane, apply 2.5 to 3.3 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves. Allow 7 or more days after application before tillage. Aerial application of up to 64 fluid ounces per acre may be made onto fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops. This product may be tank-mixed with other herbicides registered for the same use and timing. 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.

#### **Hooded Sprayers**

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

PRECAUTIONS: **DO NOT** allow treated weeds to come into contact with the crop.

## **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 Axion Ag Products, LLC 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 a higher application rate within the given range when applying to sugarcane under adverse ripening conditions or to less responsive varieties.

**FLORIDA** - Apply 5 to 12 fluid ounces of this product per acre 3 to 6 5 weeks before harvest of LAST RATOON CANE ONLY.

HAWAII - Apply 9 to 21 fluid ounces of this product per acre 4 to 10 weeks before harvest.

**LOUISIANA** - Apply 3.5 4 to 12 fluid ounces of this product per acre 3 to 7 weeks before harvest of RATOON CANE ONLY.

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

**TEXAS** - Apply 5 to 12 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), soybean, 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.

#### **VEGETABLE CROPS**

**NOTE**: THIS "VEGETABLE CROPS" SECTION GIVES DIRECTIONS FOR USE THAT APPLY TO ALL LISTED VEGETABLE CROPS WITHIN THE FOLLOWING SECTIONS. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, Prior to Transplanting Vegetables, At-Planting, Hooded Sprayers in Row-Middles, Shielded Sprayers in Row-Middles, Wiper Applications in Row-Middles, Post-Harvest, Directed Applications (Non- Bearing Ginseng), Over-the-Top Wiper Applications (Rutabagas Only).

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 herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may 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 directed, application using selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any crop not listed on this label. See additional instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section

#### **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 broccolo, 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.

RESTRICTIONS: 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 at least 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 and upland), Dandelion, Dock (sorrel), Dokudami, Endive (escarole), Florence fennel, Gow kee, Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach, New Zealand spinach, Swiss chard, Vine spinach, 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.); Martinynia; Naranjilla; Okra; Pepino; Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper); Roselle; Sunberry; Tomatillo; Tomato.

RESTRICTIONS: Allow a minimum of 3 days between application and planting. 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, and 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 APPLICATIONS: Those listed in the "ANNUAL AND PERENNIAL CROPS" section plus Spot Treatment (dry beans, peas, lentils and chickpeas only); Preharvest (dry beans, peas, lentils and 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 22 fluid ounces of this product per acre in dry beans, or up to 64 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 enhanced results, apply at or beyond the bud stage of growth.

RESTRICTIONS: 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. 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 22 fluid ounces of this product per acre in dry beans, or up to 64 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: 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. 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 (turniprooted), 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 APPLICATIONS: Those listed in the "ANNUAL AND PERENNIAL CROPS" section plus Directed Application (non-bearing ginseng only); Wiper applicator (carrot, rutabaga, sweet potato only).

# **Directed Applications (Non-Bearing Ginseng Only)**

USE INSTRUCTIONS: This product may be used for weed control in established non-bearing ginseng using boom equipment, CDA, shielded sprayers, wiper applicator, hand-held or backpack wand, lances, and orchard gun. See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the label.

PRECAUTIONS: 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.

RESTRICTIONS: Application must be made a minimum of one year prior to ginseng harvest.

#### Wiper Applications (Carrot, Rutabagas 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: 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. For rutabaga, allow a minimum of 14 days between application and harvest. 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.

#### **MISCELLANEOUS CROPS**

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut, Pineapple, Sugar beet.

TYPES OF APPLICATIONS: Those listed in the "ANNUAL AND PERENNIAL CROPS" section plus Spot Treatment (asparagus)

For Roundup Ready or glyphosate-resistant sugar beets, see the "ROUNDUP READY OR GLYPHOSATE-RESISTANT 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 weed control or for site preparation prior to planting or transplanting crops listed in this section.

PRECAUTIONS: 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: 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, but prior to the emergence of new spears.

RESTRICTIONS: **DO NOT** treat more than 10 percent of the total field area to be harvested. **DO NOT** harvest within 5 days of treatment.

#### Post-Harvest (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.

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

# TREE, VINE AND SHRUB CROPS (ALPHABETICAL)

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

TYPES OF APPLICATIONS: 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 11 fluid ounces to 3.3 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 7 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.

**RESTRICTIONS:** 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 the rows of labeled tree and vine crops. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application.

TANK MIXTURES: A tank mixture of this product plus Oxyflurofen may be used for annual weeds in middles between rows (middles) of a variety of tree and vine crops. Use this mixture when weeds are stressed or growing in dense populations. Application of 11 to 22 fluid ounces per acre of this product plus labeled rate of Oxyfluorfen will control annual weeds with a maximum height or diameter 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 diameter of 3 inches.

This product may also be tanked mixed with other herbicide products registered for the same use and timing. 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.

## Strips (in rows)

TANK MIXTURES: This product may be applied within rows of tree, vine and shrub crops with other herbicide products registered for the same use and timing. 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.

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 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4 fluid ounces of this product per acre. **DO NOT** add ammonium sulfate.

For enhanced results, mow cool-season grass covers in the spring to even their height and 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 fluid ounces of this product in 10 to 25 gallons of water per acre. Apply 1 to 2 weeks after full greenup or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence. For suppression up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 2 to 3 fluid ounces per acre about 45 days later. Make no more than 2 applications per year. For burndown of Bermudagrass, apply 22 to 44 fluid ounces of this product in 3 to 20 gallons of water per acre. Use this treatment only if reduction of the Bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

For suppression of Bermudagrass, apply 4 to 11 fluid ounces of this product per acre east of the Rocky Mountains and 11 fluid ounces of this product per acre west of the Rocky Mountains. Apply 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 regrowth occurs and Bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, rates of 4 to 7 fluid ounces of this product per acre should be used 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.

<u>Citrus Trees:</u> 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.

<u>Nut Trees:</u> 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 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 enhanced results, cut the tree during period of active growth and full leave expansion and apply this product.

PRECAUTIONS: **DO NOT** MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF ADJACENT DESIRABLE TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP, INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES. Some sprouts, stems, or trees may share

the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

#### **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 APPLICATIONS: Those listed in the "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. To the extent consistent with applicable law, grower assumes all responsibility for crop losses resulting from misapplication of this product.

RESTRICTIONS: Allow a minimum of 3 days between application of this product and transplanting. Allow a minimum of 30 days between application and harvest of cranberries or the planting of any crop not listed on this label. 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: 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 0.4- to 0.7-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 44 to 86 fluid ounces 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. 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.

#### **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 APPLICATIONS: Those listed in the "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 the rates of this product 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 44 to 64 fluid ounces of this product per acre in 20 to 30 gallons of water per acre when plants are actively growing. Apply 44 fluid ounces per acre when plants are less than 8 inches tall and 64 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 Diuron or Diuron + Bromacil could improve control. 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.

#### Perennial weeds:

Weed Species	Level of Perennial Weed Control at Various Application Rates (amount of this product per acre)			
	22 fl oz	44 fl oz	2 quarts	3.3 quarts
Bermudagrass	В		PC	С
Guineagrass				
Texas and Florida Ridge	В	С	С	С
Florida Flatwoods		В	С	С
Paragrass	В	С	С	С
Torpedograss	S		PC	С
S = Suppression; PC = Partial Control; B = Burndown, C = Control				

RESTRICTIONS: **Pre-harvest Interval (PHI):** Allow a minimum of 1 day between application and harvest in citrus crops. For citron groves, apply as directed sprays only.

## 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 APPLICATIONS: Those listed in the "TREE, VINE AND SHRUB CROPS" section.

RESTRICTIONS: **Pre-harvest Interval (PHI):** Allow a minimum of 1 day between application and harvest in pome fruit.

#### STONE FRUIT CROPS

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

TYPES OF APPLICATIONS: Those listed in the "TREE, VINE AND SHRUB CROPS" section.

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

#### TREE NUTS 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 APPLICATIONS: Those listed in the "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. Allow 14 days between application and harvest ofcoconut.

## TROPICAL AND SUBTROPICAL TREES AND FRUITS 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; Ilama; 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 APPLICATIONS: Those listed in the "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. Allow a minimum of 14 days between application and harvest for any other tropical or 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 disease free buffers around plantations. Remove all fruit from the plants within the area prior to treatment. Inject 0.04 fluid ounce (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 should be injected vertically into the top. Any subsequent regrowth 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 program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant may not show symptoms of the Banana Bunchy Top Virus for up to 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 0.5 fluid ounce (15 milliliters) of this product per mat (or unit). **DO NOT** harvest any fruit or plant materials from treated mats (or units) following injection. **DO NOT** allow livestock to consume treated plant materials. Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for weed control.

#### **VINE CROPS**

LABELED CROPS: Hops, Passion fruit.

TYPES OF APPLICATIONS: Those listed in the "TREE, VINE AND SHRUB CROPS" section.

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

RESTRICTIONS: **Pre-harvest Interval (PHI):** Allow a minimum of 14 days between application and harvest in vine crops.

## **MISCELLANEOUS TREE FOOD CROPS**

LABELED CROPS: Cactus (all, including prickly pear, dragon fruit), Palm

TYPES OF APPLICATIONS: Those listed in the "TREE, VINE AND SHRUB CROPS" section.

#### NON-FOOD TREE CROPS

LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas trees, Other non-food tree crops.

TYPES OF APPLICATIONS: Those listed in the "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 may be protected from the spray solution by using shields or coverings of impermeable material.

RESTRICTIONS: **DO NOT** apply this product as a broadcast application of ther 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. PRECAUTIONS: Protect non-target plants from being sprayed with this product during site preparation applications.

#### 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.

## PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS

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.

#### ALFALFA, CLOVER, AND OTHER FORAGE LEGUMES

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

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Spot Treatment; Wiper Applicator; Preharvest (except Kenaf and Leucaena); Stand Removal.

For directions for use with Roundup Ready or glyphosate-resistant alfalfa, see the 'ROUNDUP READY AND OTHER GLYPHOSATE-RESISTANT CROPS" section of this label.

#### Preplant, Preemergence, At-Planting

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

RESTRICTIONS: 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 Preharvest (except Kenaf and Leucaena) 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 6 to 8 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.

PRECAUTIONS: 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. 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 44 fluid ounces of this product per acre in alfalfa and up to 32 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.

PRECAUTIONS: This application can destroy an alfalfa stand and severely injure or destroy other legume crops listed, including clover. Preharvest application on alfalfa grown for seed could result in a reduction in germination or vigor. 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 to graze within the application area.

Crop	Maximum Single Preharvest Application Rate (per acre)	Minimum Interval Between Application and Harvest or Livestock Grazing
Alfalfa	44 fluid ounces	36 hours
All other legumes listed	32 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.

## **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 5 to 8 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.

PRECAUTIONS: 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 quarts of this product per acre per year onto CRP land. 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.

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

## **GRASS SEED OR SOD PRODUCTION**

LABELED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed in "Cereal and Grain Crops" section of this label.

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Renovation, Removal of Established Stand; Site Preparation, Shielded Sprayers, Wiper Applications, Spot Treatment, Creating Rows in Annual Rvegrass.

**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 turf grass 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 enhanced 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 3.3 quarts per acre may be used to totally remove an established stand of hard-to-kill grass species.

RESTRICTIONS: If application rate is 2 quarts of this product per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 2 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. 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 22 to 64 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 in shielded sprayer application. Enhanced 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.

PRECAUTIONS: Contact of this product in any manner to any vegetation to which application is not intended may cause damage.

#### **Wiper Applications**

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.

PRECAUTIONS: 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 or drop nozzles designed to target the application over a narrow band. Set nozzle height to establish the desired row spacing and apply 11 to 22 fluid ounces of this product per acre. Enhanced 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.

#### **PASTURES**

LABELED CROPS: Bahiagrass; Bermudagrass; Bluegrass; Brome; Fescue; Guineagrass; 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 APPLICATIONS: Preplant, Preemergence, Pasture Renovation, Spot Treatment, Wiper Applications, 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: If application rates total 2 quarts 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 2 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. 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 Applications**

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 use with a wiper applicator at rates of 2 quarts per acre or less, this product may be applied over the entire pasture or any portion of it. At rates above 2 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 8 to 11 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.

**NOT** apply more than 2 quarts of this product per acre per year onto pasture grasses except for renovation use as described on this label. 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.

#### **RANGELAND**

TYPES OF APPLICATIONS: Postemergence.

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

Preventing seed production is critical to control invasive annual grassy weeds in 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 8 to 11 fluid ounces of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass in 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 11 fluid ounces of this product per acre at the 3-leaf stage. Delaying applications 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 slow decaying culms. Allow new growth to occur before spraying this product after a burn. Repeat applications in subsequent years are necessary to eliminate the seed-bank before reestablishing desirable perennial grasses in medusahead-dominated rangelands.

RESTRICTIONS: **DO NOT** apply more than 2 quarts 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.

#### ROUNDUP READY OR GLYPHOSATE-RESISTANT CROPS

Roundup Ready or glyphosate-resistant\* 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 Roundup Ready or glyphosate-resistant. Avoid contact of this product with foliage, green stems, or fruit of crops, or any desirable plants that **DO NOT** contain a Roundup Ready or glyphosate-resistant gene, as severe plant injury or destruction will result.

Roundup Ready or glyphosate-resistant 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 Roundup Ready or glyphosate-resistant.

Crops not containing a gene that expresses glyphosate-resistance will not be tolerant to this product 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 this product.

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 Roundup Ready or glyphosate-resistant crop during the complete cropping season. **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:** Roundup Ready seed, and the method of selectively controlling weeds in a Roundup Ready 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 Roundup Ready seed must be obtained prior to planting. Bayer 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 Roundup Ready or glyphosate-resistant trait cannot be used for research and demonstration, reverse engineering or in connection with herbicide registration. Progeny seed containing a Roundup Ready or glyphosate-resistant 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 Roundup Ready or any other glyphosate-resistant 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 Roundup Ready and other glyphosate-resistant 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 Roundup Ready or glyphosate-resistant 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-RESISTANT 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 enhanced 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 glyphosate-resistant crops. 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.

Always predetermine the compatibility of tank-mix products together in the carrier by mixing small proportional quantities in advance. Axion Ag Products, LLC has not tested this product with all tank-mix product formulations for compatibility, antagonism or performance. 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 Roundup Ready or glyphosate-resistant 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 Roundup Ready and other glyphosate-resistant 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 Roundup Ready or glyphosate-resistant 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 other 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.

#### ROUNDUP READY OR GLYPHOSATE-RESISTANT ALFALFA

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Post-emergence (In-Crop) USE INSTRUCTIONS: Refer to the following table for the maximum application rates of this product.

Maximum Application Rates (per acre)		
Combined total per year for all applications, including Preplant during year of establishment	5.3 quarts	
Preplant, At-Planting and Preemergence single application	44 fluid ounces	
Combined total per year for in-crop applications for newly established and established stands	4.1 quarts	

See the "ROUNDUP READY OR GLYPHOSATE-RESISTANT 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.

## Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Roundup Ready or glyphosate-resistant alfalfa.

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied over the top of Roundup Ready or glyphosate-resistant alfalfa (in-crop) from emergence until 5 days prior to cutting. To maximize crop yield and quality potential of 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 Roundup Ready or glyphosate-resistant 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 may not contain a Roundup Ready or glyphosate-resistant 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 22 fluid ounces per acre of this product per acre at or before the 4-trifoliate growth stage. Refer to the following table for application rates during stand establishment (seeding year).

NEW STAND ESTABLISHMENT (SEEDING YEAR) Application Rates (per acre)		
Prior to First Cutting		
From emergence up to 4 trifoliate leaves	22 to 44 fluid ounces	
From 5 trifoliate leaves up to 5 days before first cutting	Up to 44 fluid ounces	
After First Cutting		
In-crop application, per cutting up to 5 days before cutting	Up to 44 fluid ounces	

TANK MIXTURES: Up to 44 fluid ounces of this product may be applied postemergence (in-crop) over the top of Roundup Ready or glyphosate-resistant alfalfa in the seeding year in a tank-mix with other herbicides registered for the same use and timing. Apply after weeds have emerged, but before alfalfa growth or regrowth 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. 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.

**Note:** Imazethapyr or Imazamox applied to seedling alfalfa could result in a temporary reduction of growth. **DO NOT** include crop oil concentrate or methylated seed oil in tank mixtures with Imazethapyr or Imazamox as unsatisfactory crop injury could result.

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

ESTABLISHMENT (NON-SEEDING YEAR) Application Rates (per acre)	
In-crop application, per cutting up to 5 days before cutting	Up to 44 fluid ounces

TANK MIXES: This product may be applied postemergence (in-crop) over the top of established stands of Roundup Ready or glyphosate-resistant alfalfa in a tank-mix with other herbicides registered for the same use and timing according to the growing condition of the crop described below. Ensure that the product used in the tank-mix is labeled for application postemergence (in-crop) to alfalfa. 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.

**Actively Growing Alfalfa:** For control of emerged annual grasses and broadleaf weeds when alfalfa is actively growing, apply this product at up to 44 fluid ounces per acre in a tank mix.

**Note: DO NOT** include crop oil concentrate or methylated seed oil in tank mixtures with Imazethapyr or Imazamox as unsatisfactory crop injury could result.

**Dormant Alfalfa:** For control of emerged annual grasses and broadleaf weeds when alfalfa is dormant, this product may be applied at up to 44 fluid ounces per acre in a tank mix when daily temperatures remain above freezing.

**Note: DO NOT** include crop oil concentrate or methylated seed oil in tank mixtures with Imazethapyr or Imazamox as unsatisfactory crop injury could result.

PRECAUTIONS: Where Roundup Ready or glyphosate-resistant 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-Roundup Ready (non-Glyphosate-resistant) species.

RESTRICTIONS: **DO NOT** exceed 44 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 (nonseeding year) must not exceed 4.1 quarts (132 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.

## ROUNDUP READY OR GLYPHOSATE-RESISTANT CANOLA (SPRING VARIETIES)

Roundup Ready or glyphosate-resistant spring canola is defined as those Roundup Ready or glyphosate-resistant canola varieties that are seeded in the spring and harvested in the fall and **DO NOT** enter a winter dormancy period.

TYPES OF APPLICATIONS: 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 Roundup Ready or glyphosate-resistant canola.

Maximum Application Rates (per acre)		
Total of all Preplant, At-Planting, Preemergence applications	44 fluid ounces	
Total of all In-crop applications from emergence to 6-leaf stage	22 fluid ounces	

See the "ROUNDUP READY OR OTHER GLYPHOSATE-RESISTANT CROPS" section of this label for information regarding the use of this product in Roundup Ready or glyphosate-resistant 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 Roundup Ready or glyphosate-resistant spring canola.

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 44 fluid ounces per acre per year.

#### Postemergence (In-crop)

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

**Single Application:** Apply 11 to 16 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 applications of more than 11 fluid ounces per acre are applied after the 4-leaf stage.

**Sequential Applications:** Apply 11 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 applications works better for control of early emerging annual weeds 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 of all in-crop applications must not exceed 22 fluid ounces of this product per acre. **Pre-harvest Interval (PHI):** Allow a minimum of 60 days between last 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 11 and 22 fluid ounces per acre from emergence until pollination is complete or near completion for the control of non-Glyphosate-resistant canola pollen parental line(s) in hybrid canola seed production fields containing both Roundup Ready or glyphosate-resistant canola line(s) and non-Glyphosate-resistant line(s). Sequential applications may be made for the control of non-Glyphosate-resistant pollen parental line(s) up to a maximum total application rate of 22 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-resistant canola, is 22 fluid ounces per acre.

#### ROUNDUP READY OR GLYPHOSATE-RESISTANT CANOLA (WINTER VARIETIES)

Roundup Ready or glyphosate-resistant winter canola is defined as those Roundup Ready or glyphosate-resistant 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 APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop).

USE INSTRUCTIONS: Refer to the following table for the maximum application rates for this product with Roundup Ready or glyphosate-resistant canola (winter varieties).

Maximum Application Rates (per acre)	
Total of all Preplant, At-Planting, Preemergence applications	44 fluid ounces
Total of all In-crop applications from emergence to canopy closure or prior to bolting in the spring	22 fluid ounces

See the "ROUNDUP READY OR GLYPHOSATE-RESISTANT CROPS" section of this label for information regarding the use of this product in Roundup Ready or glyphosate-resistant 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 Roundup Ready or glyphosate-resistant winter canola.

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied to winter varieties of Roundup Ready or glyphosate-resistant canola from emergence to canopy closure in the fall and prior to bolting in the spring. Applications

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 regrowth has occurred and at least 60 days after the initial application of this product.

**Single Application:** Apply 16 to 22 fluid ounces of this product per acre in the fall when weeds are small and actively growing. Use the higher rate within this range when weed densities are high, when weeds have overwintered or when weeds become large and well established. Applications of more than 16 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 Applications:** Apply 11 to 22 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 applications work best for 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, 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 44 fluid ounces of this product per acre. **Pre-harvest Interval (PHI):** Allow a minimum of 60 days between last application and harvest of canola grain. No waiting period is required between application and open grazing of livestock.

#### ROUNDUP READY OR GLYPHOSATE-RESISTANT CORN

Contact the seed manufacturer, seed distributor or seed supplier to determine if the seed variety is designated and support as glyphosate-resistant.

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

Maximum Allowable Combined Application Quantities Per Year	
Combined total per year for all applications	5.3 quarts per acre
Total of Preplant, At-Planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from emergence through the V8 stage or 30	44 fluid ounces per acre
inches	
Maximum Preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before	22 fluid ounces per acre
harvest	

#### 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 other herbicides registered for the same use and timing. 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.

**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 a preemergence residual herbicide.

#### Postemergence (In-Crop)

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready or glyphosate-resistant 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 Roundup Ready or glyphosate-resistant 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 16 to 22 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 16 to 22 fluid ounces per acre will control the labeled grasses and broadleaf weeds.

TANK MIXTURES: This product may be tank mixed with other herbicides registered for the same use and timing. 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.

PRECAUTIONS: See the "ROUNDUP READY OR GLYPHOSATE-RESISTANT CROPS" section of this label for precautionary instructions for use in Roundup Ready or glyphosate-resistant crops.

RESTRICTIONS: Single In-Crop applications of this product are not to exceed 22 fluid ounces per acre. Sequential In-Crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 44 fluid ounces per acre per year. Allow a minimum of 10 days between In-Crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage.

#### **Preharvest**

USE INSTRUCTIONS: In Roundup Ready or glyphosate-resistant corn, up to 22 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).

RESTRICTIONS: **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.

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

## FIELD CORN HYBRIDS WITH ROUNDUP READY 2 TECHNOLOGY OR GLYPHOSATE-RESISTANT Optional: Field corn bybrids with Roundup Ready 2 Technology include Roundup Ready Corn 2 and field

[Optional: 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 or glyphosate-resistant. For directions for use on SWEET CORN hybrids that contain Roundup Ready 2 Technology or glyphosate-resistant, see the "Sweet Corn Hybrids with Roundup Ready 2 Technology or Glyphosate-Resistant" section of this label. [Alternative text: For directions for use on Roundup Ready or Glyphosate-Resistant Sweet Corn, see the "Roundup Ready or Glyphosate-Resistant 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 or glyphosate-resistant.

Maximum Application Rates (per acre)	
Combined total per year for all applications	5.3 quarts
Total of all Preplant, At-Planting, Preemergence applications	3.3 quarts
Maximum single In-crop application rate up to 48-inch corn	32 fluid ounces
Total for all In-crop applications from emergence through 48-inch corn	64 fluid ounces

<sup>\*</sup>See RESTRICTIONS for Preharvest application.

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

PRECAUTIONS: 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 or glyphosate-resistant 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 corn.

TANK MIXTURES: This product may be tank mixed with other herbicides registered for the same use and timing. 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. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

RESTRICTION: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.3 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, a postemergence (in-crop) application of this product should be applied following the use of less than labeled rates of a preemergence residual herbicide.

#### 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 32 fluid ounces per acre. Total incrop application of this product from corn plant emergence through 48 inches in height must not exceed 64 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 16 to 22 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 other herbicides registered for the same use and timing. 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.

RESTRICTIONS: Allow a minimum of 10 days between in-crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage or grain.

#### **Preharvest**

USE INSTRUCTIONS: Up to 22 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 44 fluid ounces of this product per acre. 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. 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.

RESTRICTIONS: 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 Bayer 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 vield loss.

USE INSTRUCTIONS: This product may be applied at rates of between 11 and 32 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 64 fluid ounces. The maximum combined total amount of this product that may be applied per year for both weed control and tassel control is 5.3 quarts per acre.

## SWEET CORN HYBRIDS WITH ROUNDUP READY 2 TECHNOLOGY OR GLYPHOSATE-RESISTANT [ALTERNATIVE HEADING: ROUNDUP READY OR GLYPHOSATE-RESISTANT SWEET CORN]

[Optional statement if using the title with Roundup Ready 2 Technology or glyphosate-resistant: Sweet corn hybrids with Roundup Ready 2 Technology or Glyphosate-Resistant include Roundup Ready or Glyphosate-Resistant 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 or glyphosate-resistant [Alternative text: The directions for use in this section apply only to use on Roundup Ready or Glyphosate-Resistant Sweet Corn]. For directions for use on FIELD CORN hybrids that contain Roundup Ready 2 Technology or Glyphosate-Resistant, see the "Field Corn Hybrids with Roundup Ready 2 Technology or Glyphosate-Resistant" 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 or glyphosate-resistant. [Alternative text: Refer to the following table for maximum application rates of this product with Roundup Ready or glyphosate-resistant sweet corn.]

Maximum Application Rates (per acre)		
Combined total per year for all applications	5.3 quarts	
Total of all Preplant, At-Planting, Preemergence applications	3.3 quarts	
Maximum single In-crop application rate up to 48-inch corn	44 fluid ounces	
Total for all In-crop applications from emergence through 48-inch corn	4.1 quarts	

See the "ROUNDUP READY OR GLYPHOSATE-RESISTANT 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.

PRECAUTIONS: 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 or glyphosate-resistant 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 Roundup Ready or glyphosate-resistant 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 or glyphosate-resistant. [Alternative text: This product may be applied alone or in a tank mixture before, during or after planting Roundup Ready or glyphosate-resistant sweet corn.]

TANK MIXTURES: This product may be tank mixed with other herbicides registered for the same use and timing. 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. Apply these tank mixtures in 10 to 20 gallons of water or in 10 to 60 gallons of nitrogen solution per acre.

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.3 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: Roundup Ready or glyphosate-resistant] sweet corn [Alternative text: hybrids with Roundup Ready 2 Technology or glyphosate-resistant] 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 44 fluid ounces per acre. Total in-crop application of this product from emergence through 48 inches in height must not exceed 4.1 quarts (132 fluid ounces) per acre per 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 16 to 22 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 16 to 22 fluid ounces per acre may be made before weeds exceed 4 inches in height.

TANK MIXTURES: This product may be tank mixed with other herbicides registered for the same use and timing. 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.

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. Allow a minimum of 30 days between application of this product and harvest of sweet corn forage or grain.

## ROUNDUP READY OR GLYPHOSATE-RESISTANT COTTON

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

TYPES OF APPLICATIONS: 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 Roundup Ready or glyphosate-resistant cotton.

Maximum Application Rates (per acre)		
Combined total per year for all applications	5.3 quarts	
Total of all Preplant, At-Planting, Preemergence applications	3.3 quarts	
Total of all In-crop applications from ground cracking to layby	2.5 quarts	
Maximum preharvest application rate	44 fluid ounces	
Combined total of all In-crop applications from emergence through harvest	4.0 quarts	

See the "ROUNDUP READY OR GLYPHOSATE-RESISTANT CROPS" section of this label for information regarding the use of this product in Roundup Ready or glyphosate-resistant 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 Roundup Ready or glyphosate--resistant cotton.

TANK MIXTURES: This product may be tank-mixed with dicamba and applied prior to planting only. This product may be tank mixed with other herbicides registered for the same use and timing, applied prior to crop emergence. 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. Tank mixtures of this product with other products may impact crop tolerance and increase risk of crop injury.

RESTRICTIONS: The maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.3 quarts per acre per year.

## Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied over the top of Round Up Ready or glyphosate-resistant cotton (in-crop) at rates up to 22 fluid ounces per acre per application from cracking until 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 AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN

APPLICATIONS. Over-the-top applications made after 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.

TANK MIXTURES: This product may be tank mixed with other herbicides registered for the same use and timing, applied over the top of Roundup Ready or glyphosate-resistant cotton up to the 4-leaf state. 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.

Pyrithiobac may cause leaf yellowing and/or leaf crinkling when applied postemergence (in-crop). Metolachlor or S-metolachlor applied over the top of Roundup Ready or glyphosate-resistant cotton may cause leaf injury in the form of necrotic spotting.

**Salvage Treatment** - may be used after the 4-leaf stage of development and only when weeds threaten to cause the loss of the crop. Apply 22 fluid ounces per acre of this product either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds.

IN THE STATE OF ARIZONA ONLY, up to 32 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 TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT MAY BE USED PER YEAR.

RESTRICTIONS: Maximum quantity of this product that may be applied for all in-crop applications from cracking to layby combined is 2.5 quarts per acre per year. 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 TANK-MIX PRODUCT) FOR OVER-THE-TOP APPLICATIONS TO ROUNDUP READY OR GLYPHOSATE-RESISTANT COTTON.

#### Selective Equipment (In-crop)

USE INSTRUCTIONS: This product may be applied using precision post-directed or hooded sprayers at rates up to 22 fluid ounces per acre per application to glyphosate-resistant 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 leaves of the plant. To minimize contact, maintain a low spray pressure (less than 30 psi) 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 enhanced results, apply this product while weeds are small (less than 3 inches in height). See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the label for additional use instructions.

TANK MIXTURES: This product may be tank mixed with other herbicides registered for the same use and timing using precision post directed or hooded sprayers. 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.

Pyrithiobac could cause leaf yellowing and/or leaf crinkling when applied postemergence (in-crop) to Roundup Ready or glyphosate-resistant cotton.

RESTRICTIONS: Maximum quantity of this product that may be applied for all in-crop applications from cracking to layby combined is 2.5 quarts per acre per year. NO MORE THAN TWO APPLICATIONS OF THIS PRODUCT MAY BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL OVERTHE-TOP OR POSTDIRECTED APPLICATIONS OF THIS PRODUCT IN-CROP MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS.

#### **Preharvest**

USE INSTRUCTIONS: Up to 44 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 glyphosate-resistant cotton.

RESTRICTIONS: **DO NOT** apply this product for preharvest weed control to cotton grown for seed, as a reduction in germination or vigor may occur. Buyer and all users are responsible for any and all losses or damage in connection with the preharvest use of this product on glyphosate-resistant cotton grown for seed. **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 roundup ready or glyphosate-resistant cotton.

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

#### **ROUNDUP READY® 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 Roundup Ready Flex cotton. Applications described in this section made over the top of cotton other than Roundup Ready Flex cotton will cause crop injury and reduced yields. **DO NOT** combine the directions for use in this section with those in the "Roundup Ready or Glyphosate-Resistant Cotton" section of this label, or with any other directions for use on Roundup Ready or glyphosate-resistant cotton or Roundup Ready Flex cotton on labeling for this or any other Glyphosate-containing product. Drift of this product from an application made to Roundup Ready Flex cotton onto adjacent fields of post 4-leaf (node) Roundup Ready or glyphosate-resistant cotton could cause extensive crop injury, including boll loss, delayed maturity and/or yield loss.

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop), Preharvest. USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready Flex cotton.

Maximum Application Rates (per acre)	
Combined total per year for all applications	5.3 quarts
Total of all Preplant, At-Planting, Preemergence applications	3.3 quarts
Total for all In-crop applications from cracking to 60 percent open bolls	4 quarts
Total for all In-Crop applications between layby and 60 percent open bolls	44 fluid ounces
Total for all In-crop applications from 60 percent open bolls to 7 days prior to harvest	44 fluid ounces
Total for all In-crop applications from emergence through harvest	4 quarts

See the "ROUNDUP READY OR GLYPHOSATE-RESISTANT CROPS" section of this label for information regarding the use of this product in Roundup Ready or glyphosate-resistant 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 Roundup Ready Flex cotton.

TANK MIXTURES: This product may be tank-mixed with dicamba and applied prior to planting only. This product may be tank mixed with other herbicides registered for the same use and timing. 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. Tank mixtures of this product with other products may impact crop tolerance and increase risk of crop injury.

RESTRICTIONS: The maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.3 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 Roundup Ready Flex cotton. To maximize yield potential, spray cotton early to eliminate competing weeds. Many perennial weeds will be controlled or suppressed with one or more applications of this product. Use an initial application of 22 fluid ounces per acre to control or suppress 1 to 3 inch tall annual grass and broadleaf weeds. This product may be applied postemergence to Roundup Ready Flex cotton by ground application equipment at rates up to 32 fluid ounces per acre per application. In addition to broadcast applications, post-directed spray equipment may be used to achieve more through weed coverage.

IN THE STATES OF ARIZONA, NEW MEXICO AND TEXAS (WEST OF 1-35) ONLY, up to 44 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 Roundup Ready Flex cotton. Ensure that the specific product being used in the tank mixture is registered for application postemergence (in-crop) to cotton. Read and follow label directions of all products in the tank mixture.

Acetochlor, Clethodim, Fluazifop-P-butyl, Fomesafen, Mesotrione, Metolachlor, MSMA, Quizalofop-P-ethyl, Pyrithiobac, S-metolachlor, Sethoxydim or Trifluoxysulfuron.

Pyrithiobac may cause leaf yellowing and/or leaf crinkling when applied postemergence (in-crop). Metolachlor or S-metolachlor applied over the top of Roundup Ready or glyphosate-resistant cotton may 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.

Carfentrazone-ethyl, Diuron, Flumioxazin, Fluometuron, Linuron, Metolachlor, MSMA, Smetholachlor, Pendimethalin, Prometryn, Pyrithiobac or Trifloxysulfuron

Pyrithiobac may cause leaf yellowing and/or leaf crinkling when applied postemergence (in-crop).

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.

RESTRICTIONS: The maximum single, in-crop application rate of this product to Roundup Ready Flex cotton using ground application equipment is 32 fluid ounces per acre, except in Arizona, New Mexico and west Texas (west of I-35 only), where up to 44 fluid ounces per acre may be applied in a single application using ground application equipment. In-crop application rates above 22 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 22 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 32 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 44 fluid ounces per acre. The combined total for all applications of this product made from crop emergence to 60 percent open bolls must not exceed 4.0 quarts per acre.

**DO NOT** ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR OVER-THETOP APPLICATION TO ROUNDUP READY FLEX COTTON.

#### **Preharvest**

USE INSTRUCTIONS: Up to 44 fluid ounces of this product per acre may be applied to Roundup Ready 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 Roundup Ready Flex cotton.

RESTRICTIONS: **Pre-harvest Interval (PHI):** Allow a minimum of 7 days between application and harvest of Roundup Ready Flex cotton. **DO NOT add** additional surfactant or additives containing surfactant to this product for preharvest application to Roundup Ready Flex Cotton.

## **ROUNDUP READY OR GLYPHOSATE- RESISTANT SOYBEANS**

Contact the seed manufacturer, seed distributor or seed supplier to determine if the seed variety is designated and support as glyphosate-resistant.

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop), Preharvest, Post-Harvest.

PRODUCT USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready or glyphosate-resistant soybeans.

Maximum Allowable Combined Application Quantities Per Year (per acre)		
Combined total per year for all applications	5.3 quarts	
Total of all Preplant, At-Planting, Preemergence applications	3.3 quarts	
Total for all In-crop applications from cracking through flowering (R2 stage soybean)	64 fluid ounces	
Maximum Preharvest application rate	22 fluid ounces	

See the "ROUNDUP READY OR GLYPHOSATE-RESISTANT CROPS" section of this label for information regarding the use of this product in Roundup Ready and other glyphosate-resistant 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 Roundup Ready or glyphosate-resistant soybeans.

TANK MIXTURES: This product may be tank-mixed with dicamba and applied prior to planting only. This product may be tank mixed with other herbicides registered for the same use and timing. 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. Tank mixtures of this product with other products may impact crop tolerance and increase risk of crop injury.

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.3 quarts per acre per year.

## Postemergence (In-crop)

USE INSTRUCTIONS: This product may be used to control annual grasses and broadleaf weeds in Roundup Ready or glyphosate-resistant soybeans from emergence (cracking) through flowering (R2 stage soybean). R2 stage soybeans 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 the label booklet for this product for specific annual weeds. An initial application of 22 fluid ounces 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 lager, apply a higher rate of this product. This product may be applied up to 44 fluid ounces per acre as a single, in-crop application for control of annual weeds and where dense weed populations exist.

A 22- to 44-fluid-ounce per acre rate (single or multiple applications) of this product will control or suppress perennial weeds, such as, bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome Johnson grass, redvine, trumpetcreeper, swamp smartweed and wirestem muhly. For best results, allow perennial weed species to achieve at least 6 inches of growth before spraying with this product.

Under adverse growing conditions including drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product may be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY SOYBEAN OR GLYPHOSATE-RESISTANT CROP. To control giant ragweed, use 22 fluid ounces of this product per acre be applied 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 other herbicides registered for the same use and timing. 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. Tank mixtures of this product with other products may impact crop tolerance and increase risk of crop injury.

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

RESTRICTIONS: The combined total application from crop emergence through harvest must not exceed 64 fluid ounces per acre. The maximum rate for any single in-crop application is 44 fluid ounces per acre. The maximum combined total of this product that can be applied during flowering (R2 stage soybeans) is 44 fluid ounces per acre.

#### **Preharvest**

USE INSTRUCTIONS: Apply up to 22 fluid ounces of this product per acre to Roundup Ready or glyphosate-resistant 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.

RESTRICTIONS: **Pre-harvest Interval (PHI)**: Allow a minimum of 14 days between final 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 Roundup Ready or glyphosate-resistant soybeans. 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. 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.

# ROUNDUP READY 2 YIELD OR GLYPHOSATE- RESISTANT SOYBEANS [SOYBEANS WITH ROUNDUP READY 2 YIELD GENE OR GLYPHOSATE-RESISTANT]

TYPES OF APPLICATIONS: 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 Roundup Ready 2 Yield or glyphosate-resistant soybeans.

Maximum Application Rates (per acre)		
Combined total per year for all applications	5.3 quarts	
Total of all Preplant, At-Planting, Preemergence applications	3.3 quarts	
Total of all in-crop applications from cracking through flowering (R2 stage soybeans)	64 fluid ounces	
Maximum preharvest application rate	22 fluid ounces	

RESTRICTIONS: See the "ROUNDUP READY OR GLYPHOSATE-RESISTANT CROPS" section of this label for information regarding the use of this product in Roundup Ready or glyphosate-resistant corps. 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 soybeans with Roundup Ready 2 Yield gene or glyphosate-resistant.

TANK MIXTURES: This product may be tank-mixed with dicamba and applied prior to planting only. This product may be tank mixed with other herbicides registered for the same use and timing. 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. Tank mixtures of this product with other products may impact crop tolerance and increase risk of crop injury.

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.3 quarts per acre per season.

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be used to control annual grasses and broadleaf weeds in soybeans with Roundup Ready 2 Yield gene or glyphosate-resistant from emergence (cracking) through flowering (R2 stage soybeans). R2 stage soybeans end 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). An initial application of 22 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 44 fluid ounces per acre as a single, in-crop application for control of annual weeds and where dense weed populations exist. Application of 22 to 44 fluid ounces of this product per acre rate (single or multiple applications) will control or suppress perennial weeds, such as, Bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed and wirestem muhly. For enhanced results, allow perennial weed species to achieve at least 6 inches of growth before spraying with this product.

Under adverse growing conditions, including drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product may be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY 2 YIELD OR GLYPHOSATE-RESISTANT SOYBEAN CROP. To control giant ragweed, apply 22 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 other herbicides registered for the same use and timing. 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.

PRECAUTION: In some cases, these tank-mix product s will cause visual soybean injury.

RESTRICTIONS: This combined total application of this product from crop emergence through harvest must not exceed 64 fluid ounces per acre. The maximum rate for any single in-crop application is 44 fluid ounces per acre. The maximum combined total of this product that can be applied during flowering (R2 stage soybeans) is 44 fluid ounces per acre.

#### **Preharvest**

USE INSTRUCTIONS: This product may be applied to Roundup Ready 2 Yield or glyphosate-resistant soybeans for weed control prior to harvest. Apply up to 22 fluid ounces of this product per acre after pods have set and lost all green color. Up to 22 fluid ounces of this product per acre may be applied to Roundup Ready 2 Yield or glyphosate-resistant soybeans for weed control prior to harvest after pods have set and lost all green color.

PRECAUTIONS: Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

RESTRICTIONS: **Pre-harvest Interval (PHI):** Allow a minimum of 14 days between final 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 Roundup Ready 2 Yield or glyphosate-resistant soybeans. 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. 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 planting of any crop not listed on this label.

## **ROUND UP READY OR GLYPHOSATE-RESISTANT SUGAR BEETS**

TYPES OF APPLICATIONS: Preplant, Preemergence, At-Planting, Postemergence.

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready or glyphosate-resistant sugar beet.

Maximum Application Rates (per acre)					
Combined total per year for all applications	5.3 quarts				
Total for all Preplant, At-Planting, Preemergence applications	3.3 quarts				
Maximum for all applications made from emergence to 8-leaf stage	32 fluid ounces				
Total for all applications made from emergence to 8-leafe stage	56 fluid ounces				
Maximum single application rate between 8-leaf stage and canopy closure	22 fluid ounces				
Total for all applications made between 8-leaf stage and canopy closure	44 fluid ounces				

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

## Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting of Roundup Ready or glyphosate-resistant sugar beets.

TANK MIXTURES: This product may be tank mixed with other herbicides registered for the same use and timing. 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.

RESTRICTION: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.3 quarts per acre per year.

## Postemergence (In-crop)

**USE INSTRUCTIONS:** This product may be applied over-the-top of Roundup Ready or glyphosate-resistant sugar beets 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, repeat applications may be required to eliminate crop competition throughout the year. 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 other herbicides registered for the same use and timing. 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. Tank mixtures of this product with other products may impact crop tolerance and increase risk of crop injury.

RESTRICTIONS: The combined total application of this product from crop emergence through harvest must not exceed 100 fluid ounces per acre. The maximum rate for any single application from crop emergence until the 8-leaf stage is 32 fluid ounces per acre. The maximum rate for any single application between the 8-leaf stage and canopy closure is 22 fluid ounces per acre. Allow a minimum of 30 days between application and sugar beet harvest.

#### **FARMSTEAD USE**

TYPES OF APPLICATIONS: Farmstead Weed Control, Trim-and-Edge, Greenhouse/Shadehouse, Chemical Mowing, Cut Stump, 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.

#### 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 other herbicides registered for the same use and timing. 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. Tank mixtures of this product with other products may impact crop tolerance and increase risk of crop injury.

For annual weeds, apply 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, 32 fluid ounces when weeds are 6 to 12 inches tall and 44 fluid ounces when weeds are greater than 12 inches tall. For perennial weeds, apply 44 fluid ounces to 3.3 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.

#### **GREENHOUSE/SHADEHOUSE**

This product may be used to control weeds in and around greenhouses and shade-houses.

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 solutions has dried. **DO NOT** use inside residential greenhouses.

#### 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 fluid ounces of this product per acre to suppress Kentucky bluegrass, tall fescue, fine fescue, orchardgrass, bahiagrass or quackgrass covers; 11 fluid ounces to suppress bermudagrass; or 44 fluid ounces to suppress torpedograss or para grass. Make all applications in 10 to 20 gallons of spray solution per acre.

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

#### **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 enhanced 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	

PRECAUTIONS: **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.

## **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. Applications 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 treatments may be made 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 7 days after application before tillage.

RESTRICTION: 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.

#### 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:

- 22 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.
- 32 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.
- 44 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 44 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 Roundup Ready 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 (25 to 26 fluid ounces of this product per gallon of spray solution) at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 miles per hour (1 quart 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 WEEDS RATE TABLE**

WEED SPECIES	Broadcast Application Rates (fluid ounces per ac				er acre)
	11	16	22	27	32
		Maximum	height/lengt	th (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 3	_	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
Devilsclaw (unicorn plant)	_	3	6	_	_
Dwarfdandelion	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, Garolina	Foxtail; giant, bristly, yellow	6	12	20	_	_
Foxtail, green				_	_	_
Goatgrass   Jointed   6			_	_	_	_
Gorsegrass		6	12	_	_	_
Grain sorghum (milo)		_	3	6	_	12
Groundsel, common		6		20	_	
Groundsel, common		_	3	6	_	9
Hembit		_	6	10	_	_
Henbit	Groundsel, cressleaf	_	6	10	_	_
Henbit	Hemp sesbania	_	2	4	6	8
Conyza canadensis		_		6	_	12
Itchgrass	Horseweed/ Marestail*					
Jimsonweed	(Conyza canadensis)	_	6	12	_	18
Jimsonweed	, ,	6			_	18
Junglerice		_	_	12	_	18
Junglerice	Johnson grass, seedling*	6	12	18	_	24
Rnotweed   -		_	3		7	9
Nochia* 4		_				
Lambsquarters         -         6         12         -         20           Little barley         6         12         -		_	3 to 6		_	
Little barley 6 12		_			_	20
London rocket		6			_	
Mayweed         -         2         6         12         18           Morningglory, annual (Ipomoea spp)         -         -         3         -         6           Mustard, blue         6         12         18         -         -           Mustard, tansy         6         12         18         -         -           Mustard, tumble         6         12         18         -         -           Mustard, wild         6         12         18         -         -         -           Mustard, wild         6         12         18         -         -         12         18         -         -         12         18         -         -         12         18         -         -         12         18         24         -         -         -         -         -         -         -         -         -         -         -         -         -				24	-	-
Morningglory, annual ( pomoea spp)			2		12	18
(Ipomoea spp)					. —	
Mustard, blue         6         12         18         -         -           Mustard, tansy         6         12         18         -         -           Mustard, tumble         6         12         18         -         -           Mustard, wild         6         12         18         -         -           Nightshade, black         -         4         6         -         12           Nightshade, hairy         -         4         6         -         12           Oats         3         6         18         -         -           Pigweed, Palmer*         -         12         18         24         -           Picwell Status         -         -         6		-	-	3	-	6
Mustard, tumble         6         12         18         -         -           Mustard, tumble         6         12         18         -         -           Mustard, wild         6         12         18         -         -           Nightshade, black         -         4         6         -         12           Nightshade, hairy         -         4         6         -         12           Oats         3         6         18         -         -           Pigweed, Palmer*         -         12         18         24         -           Pigweed species*         -         6         12         -         18           Ragweed, common*         -         6         12         -         18           Ragweed, giant*         -         6         12		6	12		-	-
Mustard, tumble         6         12         18         -         -           Mustard, wild         6         12         18         -         -           Nightshade, black         -         4         6         -         12           Nightshade, hairy         -         4         6         -         12           Oats         3         6         18         -         -           Pigweed, Palmer*         -         12         18         24         -           Pigweed species*         -         12         18         24         -           Prickly lettuce         -         6         12         -         -           Purslane         -         -         6         12         -         18           Ragwed, common*         -         -         6         12         -         18           Ragwed, giant*         -         -		6	12	18	-	-
Mustard, wild         6         12         18         -         -           Nightshade, black         -         4         6         -         12           Nightshade, hairy         -         4         6         -         12           Nightshade, hairy         -         4         6         -         12           Oats         3         6         18         -         -           Pigweed, Palmer*         -         12         18         24         -           Pigweed, Palmer*         -         12         18         24         -           Pigweed species*         -         12         18         24         -           Pigweed species*         -         6         12         -         -           Purslane         -         6         12         -         -           Purslane         -         6         12         -         -           Purslane         -         6         12         -         18           Ragwed, common*         -         6         12         -         18           Ragwed, giant*         -         6         12         -         - <td></td> <td>6</td> <td>12</td> <td>18</td> <td>-</td> <td>-</td>		6	12	18	-	-
Nightshade, black       -       4       6       -       12         Nightshade, hairy       -       4       6       -       12         Oats       3       6       18       -       -         Pigweed, Palmer*       -       12       18       24       -         Pigweed species*       -       12       18       24       -         Pigweed species*       -       12       18       24       -         Pigweed species*       -       6       12       -       -         Pickly lettuce       -       6       12       -       -         Purslane       -       -       6       12       -       -         Purslane       -       -       6       12       -       -         Ragweed, common*       -       6       12       -       18       Ragweed, common*       -       6       12       -       18       Ragweed, common*       -       6       12       -       18       Ragweed, common*       -       -       6       12       -       -       -       -       -       -       -       -       -       -       - <td></td> <td>6</td> <td>12</td> <td>18</td> <td>-</td> <td>-</td>		6	12	18	-	-
Oats         3         6         18         -         -           Pigweed, Palmer*         -         12         18         24         -           Pigweed species*         -         12         18         24         -           Prickly lettuce         -         6         12         -         -           Purslane         -         6         12         -         -           Ragweed, common*         -         6         12         -         18           Ragweed, giant*         -         6         12         -         18           Red rice         -         -         4         -         -           Rye, volunteer/cereal ²         6         18         18+         -         -           Rye, volunteer/cereal ²         6         18         18+         -         -           Rye, volunteer/cereal ²         6         18         18+         -         -           Rye, volunteer/cereal ²         6         12         -         -         -           Rye, volunteer/cereal ²         6         12         -         -         -           Sandbur, field         6         12 <td< td=""><td></td><td>-</td><td>4</td><td>6</td><td>-</td><td>12</td></td<>		-	4	6	-	12
Oats         3         6         18         -         -           Pigweed, Palmer*         -         12         18         24         -           Pigweed species*         -         12         18         24         -           Pickly lettuce         -         6         12         -         -           Purslane         -         6         12         -         -           Ragweed, common*         -         6         12         -         18           Ragweed, giant*         -         6         12         -         18           Ragveed, giant*         -         6         12         -         18           Red rice         -         -         4         -         -           Rye, volunteer/cereal 2         6         18         18+         -         -           Rye, volunteer/cereal 2         6         18         18+         -         -           Ryegrass, species*         -         -         6         -         12           Sandbur, field         6         12         -         -         -           Shattercane         6         12         20         -		-	4	6	-	12
Pigweed species*         -         12         18         24         -           Prickly lettuce         -         6         12         -         -           Purslane         -         -         6         12         -         -           Ragweed, common*         -         6         12         -         18           Ragweed, giant*         -         6         12         -         18           Red rice         -         -         4         -         -           Rye, volunteer/cereal 2         6         18         18+         -         -           Rye, volunteer/cereal 2         6         12         -         -         -           Rye, volunteer/cereal 2         6         12         -         -         -         -         -         - <td>Oats</td> <td>3</td> <td>6</td> <td>18</td> <td>-</td> <td>-</td>	Oats	3	6	18	-	-
Prickly lettuce         -         6         12         -         -           Purslane         -         -         3         -         6           Ragweed, common*         -         6         12         -         18           Ragweed, giant*         -         6         12         -         18           Red rice         -         -         4         -         -           Rye, volunteer/cereal 2         6         18         18+         -         -           Ryegrass, species*         -         -         6         -         12           Sandbur, field         6         12         -         -         -           Sandbur, longspine         6         12         -         -         -           Shattercane         6         12         20         -         -           Shepherd's-purse         6         12         2         -         -           Sicklepod         -         2         4         -         8           Signalgrass, broadleaf         -         3         6         7         9           Smartweed, ladysthumb         -         -         6         - <td>Pigweed, Palmer*</td> <td>-</td> <td>12</td> <td>18</td> <td>24</td> <td>-</td>	Pigweed, Palmer*	-	12	18	24	-
Purslane         -         -         3         -         6           Ragweed, common*         -         6         12         -         18           Ragweed, giant*         -         6         12         -         18           Red rice         -         -         4         -         -           Rye, volunteer/cereal 2         6         18         18+         -         -           Ryegrass, species*         -         -         6         -         12           Sandbur, field         6         12         -         -         -           Sandbur, longspine         6         12         -         -         -           Shattercane         6         12         20         -         -           Shepherd's-purse         6         12         2         -         -           Sicklepod         -         2         4         -         8           Signalgrass, broadleaf         -         3         6         7         9           Smartweed, ladysthumb         -         -         6         -         9           Sowthistle, annual         -         -         6         -<	Pigweed species*	-	12	18	24	-
Ragweed, common*         -         6         12         -         18           Ragweed, giant*         -         6         12         -         18           Red rice         -         -         4         -         -           Rye, volunteer/cereal 2         6         18         18+         -         -           Ryegrass, species*         -         -         6         -         12           Sandbur, field         6         12         -         -         -           Sandbur, longspine         6         12         -         -         -           Shattercane         6         12         20         -         -           Shepherd's-purse         6         12         2         -         -           Sicklepod         -         2         4         -         8           Signalgrass, broadleaf         -         3         6         7         9           Smartweed, ladysthumb         -         -         6         -         9           Smartweed, Pennsylvania         -         -         6         -         12           Spanishneedles         -         -         6	Prickly lettuce	-	6	12	-	-
Ragweed, giant*         -         6         12         -         18           Red rice         -         -         4         -         -           Rye, volunteer/cereal ²         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         8           Signalgrass, broadleaf         -         3         6         7         9         9           Smartweed, ladysthumb         -         -         6         -         9           Sowthistle, annual         -         -         6         -         12           Spanishneedles         -         -         6         -         12           Sprangletop	Purslane	-	-	3	-	6
Red rice         -         -         4         -         -           Rye, volunteer/cereal 2         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           Sprangletop         6         12         20	Ragweed, common*	-	6	12	-	18
Red rice         -         -         4         -         -           Rye, volunteer/cereal 2         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           Sprangletop         6         12         20	Ragweed, giant*	-	6	12	-	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         -         -		-	-	4	-	-
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         -         -	Rye, volunteer/cereal <sup>2</sup>	6	18	18+	-	-
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         -         -	Ryegrass, species*	-	-	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         -         -	Sandbur, field	6	12	-	-	-
Shattercane         6         12         20         -         -           Shepherd's-purse         6         12         -	Sandbur, longspine	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         -         -		6	12	20	-	-
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         -         -	Shepherd's-purse	6	12	-	-	-
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         -         -		-	2	4	-	8
Smartweed, ladysthumb         -         -         6         -         9           Smartweed, Pennsylvania         -         -         6         -         9           Sowthistle, annual         -         -         6         -         12           Spanishneedles         -         -         6         -         12           Speedwell, purslane         12         -         -         -           Sprangletop         6         12         20         -         -		-	3	6	7	9
Smartweed, Pennsylvania         -         -         6         -         9           Sowthistle, annual         -         -         6         -         12           Spanishneedles         -         -         6         -         12           Speedwell, purslane         12         -         -         -           Sprangletop         6         12         20         -         -		-	-	6	-	9
Sowthistle, annual         -         -         6         -         12           Spanishneedles         -         -         6         -         12           Speedwell, purslane         12         -         -         -           Sprangletop         6         12         20         -         -		-	-	6	-	9
Spanishneedles         -         -         6         -         12           Speedwell, purslane         12         -         -         -         -           Sprangletop         6         12         20         -         -		-	-	6	-	12
Speedwell, purslane         12         -         -         -         -           Sprangletop         6         12         20         -         -		-	-	6	-	12
Sprangletop 6 12 20		12	-	_	-	-
		6	12	20	-	-
		-	6	12	-	-

Spurge, 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	-	-
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	ı	18
Witchgrass	-	12	-	ı	-
Woolly cupgrass	-	6	12	ı	-
Yellow rocket	-	12	20	ı	-
Wild oats	3	6	18	ı	-
Wild proso millet	-	6	12	ı	18
Witchgrass	-	12	-	-	-
Woolly cupgrass	-	6	12	-	-
Yellow rocket	-	12	20	-	-

- 1 For control of downy brome in no-till systems, apply 16 fluid ounces of this product per acre.
- 2 Performance of this product can be enhanced if application is made before this weed reaches the boot stage of growth.
- 3 Apply 16 fluid ounces of this product per acre to control wild buckwheat in the cotyledon to 2-leaf stage. Apply 22 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For enhanced control of wild buckwheat over 2 inches in size, make sequential applications of 22 fluid ounces followed by 22 fluid ounces of this product per acre.
- 4 **DO NOT** apply when kochia is in the button stage.
- 5 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, or contact your Axion representative.

#### ANNUAL WEEDS - TANK MIXTURES WITH 2,4-D, DICAMBA OR PICLORAM

Enhanced control of certain hard-to-control weeds can be achieved by tank-mixing this product with Dicamba, 2,4-D or Picloram. 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, marestail/horseweed, morning glory, kochia (in a tank-mix with Dicamba only), wild buckwheat (in a tank-mix with Picloram only); 12 inches - cocklebur, lambsquarters, pigweed, Russian thistle (in a tank-mix with 2,4-D only).

At application rates given 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 enhanced control of these weeds, apply this product in a tank-mix with 2,4-D.

Ensure that the product used is labeled for application at the desired site. 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.

## **ANNUAL WEEDS—HAND-HELD**

For control of weeds listed in the "ANNUAL WEEDS RATE TABLE", apply a 0.4-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 specified, use a 0.7-percent solution.

For enhanced results on harder-to-control perennials, such as Bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle use a 0.7 percent solution.

When using application methods that result in less than complete coverage, use a 4-percent solution for annual and perennial weeds and a 4- to 7-percent solution for woody brush, trees and vines.

#### 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 16 to 20 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, witchgrass In a tank mix with atrazine and dicamba. Barnyardgrass and kochia require 20 fluid ounces of this product per acre for control in a tank mix with atrazine and dicamba. 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. Tank mixtures of this product with other products may impact crop tolerance and increase risk of crop injury.

## PERENNIAL WEEDS RATE SECTION

Apply this product to actively growing perennial weeds. New leaf development indicates active growth. Enhanced 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 enhanced 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 30 percent solution of this product (25 to 38 fluid ounces per gallon of applicator solution) at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mile per hour (2 to 3 quarts 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.

#### PERENNIAI WEEDS RATE TABLE

PERENNIAL WEEDS RATE TABLE						
Weed Species	Broadcast Rate (QT/A)	Water Volume (GPA)	Handheld Sprayer Concentration (%Solution)			
Alfalfa	1 - 1.5	3 - 10	1.5%			
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.						
Alligatorweed	3	3 - 20	1%			
For partial control, apply when most of the plants are in bloom. More than one application will be needed to achieve control.						
Anise (fennel) 1	-	-	1-1.5%			
Bahiagrass <sup>2</sup>	2 - 3.3	3 - 20	1.5%			
Bentgrass	1	10-20	1.5%			
For suppression in grass seed production areas using ground applications only. Ensure entire crown						
area has resumed growth prior to a fall application. Ensure that bentgrass has at least 3 inches of growth						
before application. Tillage 7 to 10 days after application	for enchanced	results.				
Bermudagrass	2 - 3.3	3 - 20	1.5%			

For control, apply 3.3 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 64 fluid ounces per acre.

#### Bermudagrass, water (knotgrass)

0.7 - 1

5 - 10

1.5%

Apply 32 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 or more days before tilling, flushing or flooding the field. For fall application, till fallow fields and apply 22 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 use on water bermudagrass.

Bindweed, field

0.4 - 3.3

1.5%

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 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts per acre east of the Mississippi River when bindweed is at or beyond full bloom. For enhanced results, apply in late summer or fall. Fall application must be made before a killing frost. Also for control, apply 44 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 22 to 44 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 11 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.

In California only, apply 22 fluid ounces to 3.3 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 22 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 3 or more days after application before tillage.

#### Bluegrass, Kentucky

0.7 - 1.5

3 - 40

1.5%

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre to actively growing plants when most have reached 4 to 12 inches in height.

## Blueweed, Texas

2 - 3.3

3 - 40

Apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts per acre east of the Mississippi River, when plants are at or beyond full bloom. For enhanced results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

## Brackenfern

2 - 3

3 - 40

1%

Make application to fully expanded fronds that are at least 18 inches long. Bromegrass, smooth

0.7 - 1.5

3 - 40

1.5%

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre to actively growing bromegrass when most have reached 4 to 12 inches in height.

## Bursage, woolly-leaf

3 - 20

1.5%

For control, apply 44 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 22 fluid ounces of this product per acre in a tank mix with an appropriate rate of dicamba.

Canarygrass, reed <sup>2</sup>	1.5 - 2	3 - 40	1.5%
Cattail <sup>2</sup>	2 - 3.3	3 - 40	1.5%

Clover; red, white <sup>1</sup>	2 - 3.3	3 - 20	1.5%			
Also for control, apply 11 to 22 fluid ounces of this proc	duct, in a tank mi	x with an appro	priate rate of 2,4-			
D, in 3 to 10 gallons of water per acre.						
Cogongrass	2 - 3.3	10 - 40	1.5%			
Apply in late-summer or fall when cogongrass is at lea	st 18 inches tall.	Due to uneven	stages of growth			
and the dense nature of vegetation preventing good spi	ray coverage, mo	re than one ap	plication might be			
necessary to achieve control.						
Dallisgrass <sup>2</sup>	2 - 3.3	3 - 20	1.5%			
Dandelion <sup>1</sup>	2 - 3.3	3 - 40	1.5%			
Also for control, apply 11 fluid ounces of this product p	lus 0.5 pound of	2,4-D in 3 to 10	gallons of water			
per acre.						
Dock, clurly <sup>1</sup>	2 - 3.3	3 - 40	1.5%			
Also for control, apply 11 to 22 fluid ounces of this produces	duct, in a tank mi	x with an appro	priate rate of 2,4-			
D, in 3 to 10 gallons of water per acre.	,		,			
Dogbane, hemp	3	3 - 40	1.5%			
Apply when most plants have reached the late bud to						
grow to a mature stage prior to application of this prod						
results, apply in late summer or fall.	•		3			
For suppression, apply 11 fluid ounces of this product,	in a tank mix witl	n an appropriat	e rate of 2.4-D. in			
3 to 10 gallons of water per acre for ground application						
applications. Delay applications until maximum emerge						
Fescue (except tall) <sup>2</sup>	2 - 3.3	3 - 20	1.5%			
Fescue, tall	0.7 - 2	3 - 40	1.5%			
Apply 64 fluid ounces of this product per acre when most		reached boot-to				
stage of development.			,			
Fall applications only: Apply 22 fluid ounces of this pr	oduct in 3 to 10	gallons of water	er per acre when			
plants have 6 to 12 inches of new growth. A sequenti						
product will improve long-term control and control se						
following spring.	5 5	J				
Guineagrass	1.5 - 2	3 - 40	1%			
Apply when most target plants have reached at least	st the 7-leaf sta	ge of growth.	Ensure thorough			
coverage when using hand-held equipment. In Texas a						
In the flatwoods region of Florida, 64 fluid ounces is ne						
Horsenettle <sup>1</sup>	2 - 3.3	3 - 20	1.5%			
Horseradish	3	3 - 40	1.5%			
Apply when most plants have reached the late bud to flo	ower stage of gro	wth. For enhan	ced results, apply			
in late summer or fall.	0 0		, 11 ,			
Iceplant <sup>1</sup>	_	_	1.5-2%			
Thorough coverage of the target weed with this produc	t will provide enh	anced control.				
Jerusalem artichoke <sup>1</sup>	2 - 3.3	3 - 20	1.5%			
Johnsongrass	0.4 - 2	3 - 40	1%			
In annual cropping systems, apply 22 to 44 fluid ounc	es of this produc					
acre. Use 44 fluid ounces of this product when applying						
sites or in areas where annual tillage is not practiced (r						
in 10 to 40 gallons of water per acre.	,,,		<b>-</b>			
For enhanced results, apply when most johnsongr	rass has reache	ed the boot to	head stage of			
development or in the fall prior to frost. Allow a minim						
NOT tank-mix with residual herbicides when applying 2						
For burndown of johnsongrass, apply 11 fluid ounces of						
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 0.7-percent						
		johnsongrass is 12 to 18 inches tall. Ensure that spray coverage is uniform and complete.				
∣ Kikuyuqrass						
Kikuyugrass  Apply when most kikuyugrass is at least 8 inches in heid	1.5 - 2	3 - 40	1.5%			
Apply when most kikuyugrass is at least 8 inches in heig of 3 days after application before tillage.	1.5 - 2	3 - 40	1.5%			

Knapweed	3	3 - 40	1.5%		
Apply when most plants have reached the late bud to flo					
in late summer or fall.	mor stage or gro	Wall of Officers	ood roodito, appry		
Lantana	_	_	1%		
Apply at or beyond the bloom stage of growth.			170		
Lespedeza 1	2 - 3.3	3 - 20	1.5%		
Milkweed, common	2 - 3.3	3 - 40	1.5%		
Apply when most plants have reached the late bud to fi	_		1.570		
Muhly, wirestem	0.7 - 1.5	3 - 40	1.5%		
Apply 22 fluid ounces of this product in 3 to 10 gallons of in 10 to 40 gallons of water per page or who pages and					
in 10 to 40 gallons of water per acre or whenever ap wirestem muhly is at least 8 inches tall. <b>DO NOT</b> till the					
the fall or spring prior to spring application. Allow a min					
Mullein, common 1	2 - 3.3	3 - 20	1.5%		
		3 - 20	1.5%		
Napiergrass <sup>2</sup>	2 - 3.3				
Nightshade, silverleaf	1.5	3 - 10	1.5%		
For enhanced results, apply when at least 60 percent	of the target plar	nts nave perries	s. Fall application		
must be made before a killing frost.	0.4.0	0.40	4.4.50/		
Nutsedge; purple or yellow	0.4 - 2	3 - 40	1-1.5%		
For control of nutsedge plants and immature nutlets, a					
1- to 1.5-percent solution when plants are in flower or					
Nutlets that have not germinated will not be controlled a	ind will need repe	eated applicatio	ns of this product		
after germination for long-term control.					
Sequential applications of 22 to 44 fluid ounces of this					
a majority of the nutsedge plants are in the 3- to 5-lead					
control. Repeat this application, as necessary, when ne		ants reach the t	3- to 5-leaf stage.		
Subsequent applications will be necessary for long-terr					
For partial control of existing nutsedge, apply 11 to 44					
water per acre when plants have 3 to 5 leaves and					
application, as needed, to control newly emerging plan	0.7 - 1.5		1.5%		
Orchardgrass		3 - 40			
Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply					
22 to 32 fluid ounces of this product in 3 to 10 gallons growing and has reached 4 to 12 inches in height.	or water per acr	e when orchar	agrass is actively		
When going from orchardgrass sod to no-till corn, app	ly 22 to 22 fluid a	ounces of this r	product in 2 to 10		
gallons of water per acre to orchardgrass that is a mini					
inches tall for fall application. Allow a minimum of 3 da					
application of atrazine will be necessary to achieve opt		on belore plant	ing. A sequential		
abblication of attazine will be necessary to achieve obt	iiiiuiii i Goullo.				
	_	_	1_1 5%		
Pampasgrass	-	- of growth. Thor	1-1.5%		
Pampasgrass Apply this product when pampasgrass is at or beyond	-	- of growth. Thore			
Pampasgrass Apply this product when pampasgrass is at or beyond necessary for best enhanced control.	the boot stage of		ough coverage is		
Pampasgrass Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass <sup>2</sup>	the boot stage of	3 - 20	ough coverage is		
Pampasgrass Apply this product when pampasgrass is at or beyond necessary for best enhanced control. Paragrass 2 Phragmites	- the boot stage of 2 - 3.3 2 - 3.3	3 - 20 10 - 40	1.5% 1-1.5%		
Pampasgrass  Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass 2  Phragmites  For partial control and enhanced results, apply this products.	the boot stage of 2 - 3.3 2 - 3.3 luct in late summ	3 - 20 10 - 40 er or fall when p	1.5% 1-1.5% olants are actively		
Pampasgrass Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass <sup>2</sup> Phragmites For partial control and enhanced results, apply this production growing and in full bloom. Application before or after the second seco	the boot stage of 2 - 3.3 2 - 3.3 luct in late summ his stage could r	3 - 20 10 - 40 er or fall when presult in reduce	1.5% 1-1.5% blants are actively d control. Due to		
Pampasgrass Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass <sup>2</sup> Phragmites For partial control and enhanced results, apply this prod growing and in full bloom. Application before or after the dense nature of this vegetation (which can preve	the boot stage of 2 - 3.3 2 - 3.3 luct in late summ his stage could rout good spray of	3 - 20 10 - 40 er or fall when presult in reduce overage) and u	1.5% 1-1.5% blants are actively d control. Due to uneven stages of		
Pampasgrass Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass <sup>2</sup> Phragmites  For partial control and enhanced results, apply this prod growing and in full bloom. Application before or after the dense nature of this vegetation (which can preve growth, more than one application might be necessary to	the boot stage of 2 - 3.3 2 - 3.3 luct in late summ his stage could rout good spray of	3 - 20 10 - 40 er or fall when presult in reduce overage) and u	1.5% 1-1.5% blants are actively d control. Due to uneven stages of		
Pampasgrass Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass <sup>2</sup> Phragmites For partial control and enhanced results, apply this prod growing and in full bloom. Application before or after the dense nature of this vegetation (which can preve growth, more than one application might be necessary to be slow to develop.	the boot stage of 2 - 3.3 2 - 3.3 luct in late summ his stage could rout good spray of	3 - 20 10 - 40 er or fall when presult in reduce overage) and u	1.5% 1-1.5% blants are actively d control. Due to laneven stages of lanes of control will		
Pampasgrass  Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass <sup>2</sup> Phragmites  For partial control and enhanced results, apply this produced growing and in full bloom. Application before or after the dense nature of this vegetation (which can prevegrowth, more than one application might be necessary to be slow to develop.  Poison hemlock	the boot stage of 2 - 3.3 2 - 3.3 luct in late summ his stage could rent good spray of to achieve contro	3 - 20 10 - 40 er or fall when presult in reduce overage) and u	1.5% 1-1.5% blants are actively d control. Due to uneven stages of oms of control will 1-1.5%		
Pampasgrass  Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass <sup>2</sup> Phragmites  For partial control and enhanced results, apply this production growing and in full bloom. Application before or after the dense nature of this vegetation (which can prevergrowth, more than one application might be necessary to be slow to develop.  Poison hemlock  Apply this product using a handheld sprayer with a sprayer.	the boot stage of 2 - 3.3 2 - 3.3 luct in late summ his stage could react of achieve control - y-to-wet technique.	3 - 20 10 - 40 er or fall when presult in reduce overage) and under the sum of the su	1.5% 1-1.5% blants are actively d control. Due to uneven stages of pms of control will 1-1.5% sults are obtained		
Pampasgrass  Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass <sup>2</sup> Phragmites  For partial control and enhanced results, apply this production growing and in full bloom. Application before or after the dense nature of this vegetation (which can prevergrowth, more than one application might be necessary to be slow to develop.  Poison hemlock  Apply this product using a handheld sprayer with a sprawhen thoroughly applied to target plants that are at the	the boot stage of 2 - 3.3 2 - 3.3 luct in late summ his stage could rough of the control of achieve control - y-to-wet technique bud to full-bloon	3 - 20 10 - 40 er or fall when presult in reduce overage) and ul. Visual sympto - ue. Optimum reson stage of grow	1.5% 1-1.5% blants are actively d control. Due to uneven stages of oms of control will 1-1.5% sults are obtained th.		
Pampasgrass  Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass <sup>2</sup> Phragmites  For partial control and enhanced results, apply this production growing and in full bloom. Application before or after the dense nature of this vegetation (which can prevegrowth, more than one application might be necessary to be slow to develop.  Poison hemlock  Apply this product using a handheld sprayer with a sprawhen thoroughly applied to target plants that are at the Pokeweed, common	the boot stage of 2 - 3.3 2 - 3.3 luct in late summ his stage could range of the control of achieve control y-to-wet technique bud to full-bloon	3 - 20 10 - 40 er or fall when presult in reduce overage) and under the sum of the su	1.5% 1-1.5% blants are actively d control. Due to uneven stages of pms of control will 1-1.5% sults are obtained		
Pampasgrass  Apply this product when pampasgrass is at or beyond necessary for best enhanced control.  Paragrass <sup>2</sup> Phragmites  For partial control and enhanced results, apply this production growing and in full bloom. Application before or after the dense nature of this vegetation (which can prevergrowth, more than one application might be necessary to be slow to develop.  Poison hemlock  Apply this product using a handheld sprayer with a sprawhen thoroughly applied to target plants that are at the	the boot stage of 2 - 3.3 2 - 3.3 luct in late summ his stage could range of the control of achieve control y-to-wet technique bud to full-bloon	3 - 20 10 - 40 er or fall when presult in reduce overage) and ul. Visual sympto - ue. Optimum reson stage of grow	1.5% 1-1.5% blants are actively d control. Due to uneven stages of oms of control will 1-1.5% sults are obtained th.		

In annual cropping systems or in pastures and sod fields to be cultivated with deep tillage, apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre, or 44 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 22-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 enhanced results. In pastures, sod fields or non-crop areas where deep tillage will not follow application of this product, apply 44 to 64 fluid ounces in 10 to 40 gallons of water per acre when quackgrass is greater than 8 inches tall. Redvine 0.5 - 1.55 - 10 For suppression, make two applications of 16 fluid ounces of this product 7 to 14 days apart, or a single application of 44 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. Reed, giant 1.5% Enhanced results are obtained when application is made in late summer to fall. Ryegrass, perennial 0.7 - 23 - 40 In annual cropping systems, apply 22 to 44 fluid ounces of this product in 3 to 10 gallons of water per acre, or 44 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 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre. For enhanced 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. Smartweed, swamp <sup>1</sup> 2 - 3.3 3 - 40 Also for control, apply 11 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 the late summer or fall. Sowthistle, perennial 1.5 - 23 - 40 Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow a minimum of 3 or more days after application before tillage. Spurge, leafy 3 - 10 1.5% For suppression, apply 11 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 the late summer or fall. If moving has occurred prior to treatment, apply when most of the plants are 12 inches tall. 10 - 40 Starthistle, yellow 1.5 Enhanced results are obtained when application is made during the rosette, bolting and early flower stages. Sweet potato, wild For partial control, apply to plants that are at or beyond the bloom stage of growth. More than one application might be needed. Thistle, artichoke For partial control, apply when plants are at or beyond the bloom stage of growth. More than one application might be needed. Thistle, Canada 1.5 - 2 Apply when most target plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow a minimum of 4 weeks for initiation of active growth and rosette

Apply when most target plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow a minimum of 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be made before a killing frost. For suppression in the spring, apply 22 fluid ounces of this product alone, or 11 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. Applications can be made as long as leaves are still green and plants are actively growing. Allow a minimum of 3 or more days after application before tillage.

Timothy <sup>2</sup>	1.5 - 2	3 - 40	1.5%
Torpedograss	2.5 - 3.3	3 - 40	1.5%

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.					
Trumpetcreeper	1.5	5 - 10	1.5%		
For partial control, apply in late September or October	when trumpetere	eeper is a minir	num of 18 inches		
tall and has been growing 45 to 60 days since the last	tillage operation	. Make applicat	ion a minimum of		
1 week before a killing frost.					
Vaseygrass <sup>2</sup> 2 - 3.3 3 - 20 1.5%					
Velvetgrass 2         2 - 3.3         3 - 20         1.5%					
Wheatgrass, western 2         1.5 - 2         3 - 40         1.5%					
<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 head	ding stage of gro	wth.			

## 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 concentrate 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 Enhanced results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, enhanced results can be obtained when application is made spring to early summer when brush species are at high moisture content and are flowering.

Unless otherwise directed, make broadcast treatments in 3 to 40 gallons of water per acre. Ensure thorough coverage when using hand-held sprayers. Symptoms may Herbicidal symptoms might not appear prior to frost or senescence following application in the fall.

Allow a minimum of 7 or more days after application before tillage, mowing or removal of vegetation in the application area. Repeat treatments 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)
Alder	2 - 3	1%
Ash <sup>1</sup>	1.5 – 3.3	1 – 1.5%
Aspen, Quaking	1.5 - 2	1%
Bearmat (Bearclover) 1	1.5 – 3.3	1 – 1.5%
Beech <sup>1</sup>	1.5 – 3.3	1 – 1.5%
Birch	1.5 - 2	1%
Blackberry	2 - 3	1%

Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 0.7-percent solution of this product. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 2 to 2.5 quarts of this product in 10 to 40 gallons of water per acre.

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Blackgum	1.5 – 3.3	1 – 1.5%
Bracken	1.5 – 3.3	1 – 1.5%
Broom; French, Scotch	_	1 – 1.5%
Buckwheat, California 1,2	_	1 – 1.5%
Cascara <sup>1</sup>	1.5 – 3.3	1 – 1.5%
Catsclaw <sup>1</sup>	_	1%
Ceanothus <sup>1</sup>	1.5 – 3.3	1 – 1.5%
Chamise <sup>2</sup>	_	1%
Cherry; bitter, black, pin	1.5 - 2	1%

	T	1	
Coyote brush	_	1 – 1.5%	
Apply when at least 50 percent of the new leaves are fully de			
Dogwood <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Elderberry	1.5 - 2	1%	
Elm <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Eucalyptus	_	1.5%	
For control of eucalyptus resprouts, apply when resprouts are	6 to 12 feet tall. Ensur	e complete coverage.	
Avoid application to drought- stressed eucalyptus plants.			
Florida holly (Brazilian Peppertree) <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Gorse <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Hasardia <sup>1,2</sup>	_	1 – 1.5%	
Hawthorn	1.5 - 2	1%	
Hazel	1.5 - 2	1%	
Hickory <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Honeysuckle	2 - 3	1%	
Hornbeam, American <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Kudzu	2.5 – 3.3	1.5%	
Repeat applications may be required to achieve control.	2.0 – 0.0	1.070	
Locust, black <sup>1</sup>	1.5 - 3	1 – 1.5%	
,	1.5 - 3	1.5%	
Madrone resprouts 1			
Apply to resprouts that are 3 to 6 feet tall. Best results are obtained as			
Manzanita <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Maple, red	1.5 - 3	1%	
Apply a 1-percent solution when at least 50 percent of the r	new leaves are fully d	leveloped. For partial	
control, apply 44 to 86 fluid ounces of this product per acre.	T	10/	
Maple, sugar	<u> </u>	1%	
Apply when at least 50 percent of the new leaves are fully de		1	
Monkey flower <sup>1,2</sup>		1 – 1.5%	
Oak; black, white <sup>1</sup>	1.5 - 3	1%	
Oak, post	2 - 3	1 – 1.5%	
Oak; northern	_	1 – 1.5%	
Apply when at least 50 percent of the new pin leaves are fully			
Oak; southern red	1.5 - 2	1%	
Persimmon <sup>1</sup>	1.5 – 3.3	1%	
Pine	1.5 – 3.3	1%	
Poison Ivy/Poison Oak	2.5 – 3.3	1 – 1.5%	
Repeat applications may be required to achieve control. Fall treatments must be applied before leaves			
lose green color.			
Poplar, yellow <sup>1</sup>	1.5 – 3.3	1.5%	
Redbud, eastern	1.5 – 3.3		
Rose, multiflora	1.5	1-1.5%	
Treatments should be made prior to leaf deterioration by leaf	eating insects.		
Russian olive <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Sage, black <sup>2</sup>	_	1%	
Sage, white <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Sagebrush, California <sup>2</sup>	_	1%	
Salmonberry	1.5 - 2	1 – 1.5%	
Saltcedar	1.5 – 3.3	1 – 1.5%	
Sassafras <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Sourwood <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Sumac; poison, smooth, winged <sup>1</sup>	1.5 - 3	1 – 1.5%	
Sweetgum	1.5 - 2	1%	
Swordfern <sup>1</sup>	1.5 – 3.3	1 – 1.5%	
Tallowtree, Chinese <sup>2</sup>	- 1.0 0.0	1%	
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Tan oak resprouts <sup>1</sup>	_	1 – 1.5%			
Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.					
<b>Thimbleberry</b> 1.5 - 2 1 – 1.5%					
Tobacco, tree <sup>1</sup>	_	1%			
Trumpetcreeper	1.5 - 2	1 – 1.5%			
Vine maple <sup>1</sup>	1.5 – 3.3	1 – 1.5%			
Virginia creeper	1.5 – 3.3	1 – 1.5%			
Waxmyrtle, southern <sup>1</sup>	1.5 – 3.3	1%			
Willow	2 - 3	1%			
1 Partial Control.					

2 Thorough coverage of foliage is necessary for best results.

#### **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 7 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, but not limited to: 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.]

#### 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.

## 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 tank-mixed with other herbicides registered for the same use and timing to increase the spectrum of vegetation control. 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.

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.

PRECAUTIONS: 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 22 to 44 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 22 to 36 fluid ounces of this product for release of Douglas fir, pine and spruce that have been established for only one year (except in California).

For release of spruce (*Picea* spp.) in Maine, Michigan, Minnesota, New Hampshire and Wisconsin, up to 2 quarts of this product may be applied after formation of final resting buds in the fall for control of woody brush and tree species.

PRECAUTIONS: 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 32 to 54 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 22 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 tank-mixed with other herbicides registered for the same use and timing. 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.

For release of Douglas fir established for a minimum of one year prior to bud swell in early-spring, apply 22 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 11 to 16 fluid ounces of this product in a tank-mix with labeled rate of Sulfometuron + Metsulfuron.

## Late-Summer and Fall after Resting Bud Formation

For release of jack pine and white spruce, apply 22 to 44 fluid ounces of this product in a tank-mix with labeled rate of Sulforneturon + Metsulfuron. For release of white pine, apply 22 to 44 fluid ounces of this product in a tank-mix with labeled rate of Sulforneturon + Metsulfuron.

For release of Douglas fir, apply 22 to 32 fluid ounces of this product in a tank-mix with labeled rate of Imazapyr.

For release of balsam fir and red spruce, apply 44 fluid ounces of this product in a tank-mix with labeled rate of Imazapyr.

#### 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.

## 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.

#### 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.

#### **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: If the total application rate of this product is 2 quarts per acre or less, no waiting period between application and feeding or livestock grazing is required. If the rate is greater than 2 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 enhanced 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 quarts per acre or less, this product may be applied over the entire pasture or any portion of it. At rates greater than 2 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**

when they are not dormant.

This product may be applied in dormant pastures to suppress competitive growth and seed production of annual weeds and other undesirable vegetation. Apply 8 to 11 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

**NOT** apply more than 2 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.

#### **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 7 quarts of this product per acre per year.

TANK MIXTURES: This product may be tank-mixed with other herbicides registered for the same use and timing. 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.

## **Brush, Tree and Vine Control**

This product may be used to control woody brush, trees and vines along railroad rights-of-way. Apply 2.5 to 7 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 0.7- to 1.5-percent solution of this product when using high-volume application equipment with a spray-to-wet technique, or a 4- to 7-percent solution when using low-volume directed sprays for spot treatment.

TANK MIXTURES: This product may be tank-mixed with other herbicides registered for the same use and timing. 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.

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.

#### 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 5 to 11 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 enhanced 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 11 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 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.

#### **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 other herbicides registered for the same use and timing. 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.

#### **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 7 quarts per acre per year.

TANK MIXTURES: This product may be tank-mixed with other herbicides registered for the same use and timing. 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.

## **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 8 to 10.7 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: **DO NOT** apply more than 5.3 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.

#### 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.

## 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 5 to 44 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 11 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

other herbicides registered for the same use and timing. 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.

RESTRICTION: **DO NOT** apply this product in a tank mix with Sulfosulfuron or Sulfometuron + Metsulfuron 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 11 to 32 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

For a broader weed control spectrum in actively growing bermudagrass, this product may be tank-mixed with other herbicides registered for the same use and timing. 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.

PRECAUTIONS: Applying more than 11 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 other herbicides registered for the same use and timing. 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 season, otherwise the bermudagrass could be severely injured.

RESTRICTIONS: **DO NOT** apply this product in a tank mix with Sulfosulfuron or Sulfometuron + Metsulfuron 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 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 fluid ounces of this product per acre, followed by an application of 1.5 to 3 fluid ounces per acre about 45 days later. Make no more than two growth suppression applications per year.

For a broader weed control spectrum in actively growing bahiagrass, this product may be tank-mixed with other herbicides registered for the same use and timing. 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.

PRECAUTIONS: Apply these tank mixtures only on well-established bahiagrass where some temporary injury or discoloration can be tolerated. **DO NOT** make more than one tank mix application per year.

## **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 enhanced 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: If application rates total 2 quarts 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 2 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 fluid ounces of this product per acre to suppress growth of Kentucky bluegrass, or 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 to 4 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.

PRECAUTIONS: Use this product for chemical mowing only in areas where some temporary injury or discoloration of perennial and annual grasses can be tolerated.

## **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 22 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 2.7 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 0.4-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 0.7- to 1.5-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 15-percent solution of this product (19 to 20 fluid ounces of this product per gallon of spray solution) at a flow rate of 2 fluid ounces of spray solution per minute and a walking speed of 1.5 miles per hour (1 quart 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 enhanced 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	Medusahead
Balsam apple <sup>1</sup>	Morningglory (Ipomoea spp.)
Barley	Mustard, blue
Barley, little	Mustard, tansy
Barnyardgrass	Mustard, tumble
Bassia, fivehook	Mustard, wild
Bittercress	Nightshade, black
Bluegrass, annual	Oats
Bluegrass, bulbous	Panicum, browntop
Brome, downy	Panicum, fall
Brome, Japanese	Panicum, Texas
Broomsedge	Pennycress, field
Buttercup	Pepperweed, Virginia

Cheeseweed (Malva parviflora) Cheeseweed (Malva parviflora) Purslane, common Chervil Pusley, Florida Chickweed Ragweed, common Cocklebur Ragweed, giant Copperleaf, hophornbeam Rice, red Copperleaf, Virginia Rocket, London Coreopsis, plains/tickseed Rocket, yellow Corn Rye Crabgrass Ryegrass Cupgrass, woolly Sandbur, field Dwarf dandelion Sesbania, hemp Eclipta Shattercane False dandelion Shepherd's-purse Falseflax, smallseed Fiddleneck Signalgrass, broadleaf Filaree Smartweed, ladysthumb Fleabane, annual Fleabane, hairy (Conyza bonariensis) Foxtail Foxtail Spanish needles Sprangletop Goosegrass Spurge, annual Groundsel, common Spurge, prostrate Henbit Horseweed/Marestail (Conyza canadensis) Stintgrass Starthistle, yellow Stintgrass Starthistle, yellow Stintgrass Stintgrass Stintgrass	Castor bean <sup>2</sup>	Pigweed
Cheeseweed (Malva parviflora) Chervil Chervil Pusley, Florida Chickweed Ragweed, common Cocklebur Ragweed, giant Copperleaf, hophornbeam Rice, red Copperleaf, Virginia Rocket, London Coreopsis, plains/tickseed Rye Corn Rye Crabgrass Ryegrass Cupgrass, woolly Dwarf dandelion Eclipta Shattercane False dandelion Shattercane Falseflax, smallseed Fiddleneck Signalgrass, broadleaf Filaree Smartweed, ladysthumb Fleabane, annual Fleabane, hairy (Conyza bonariensis) Fleabane, rough Foxtail Foxtail Foxtail Garolina Speedwell, corn Geranum, Carolina Goosegrass Spurge, annual Groundsel, common Spurge, prostrate Henbit Horseweed/Marestail (Conyza canadensis) Stinkgrass Starthriste, yellow Stinkgrass Stinkgrass Stinkgrass	Cheatgrass	
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Crabgrass, woolly Dwarf dandelion Sesbania, hemp Eclipta Shattercane False dandelion Shepherd's-purse Falseflax, smallseed Fiddeneck Signalgrass, broadleaf Filaree Smartweed, ladysthumb Fleabane, annual Fleabane, hairy (Conyza bonariensis) Fleabane, rough Foxtail Foxtail Foxtail Spanish needles 3 Foxtail, Carolina Geranium, Carolina Goatgrass, jointed Goatgrass, jointed Goosegrass Groundsel, common Henbit Horseweed/Marestail (Conyza canadensis) Sandbur, field Sesbania, hemp Sesbania, hemp Simulatercane Sicklepod Signalgrass, broadleaf Signalgrass, broadleaf Signalgrass, broadleaf Signalgrass, broadleaf Smartweed, Pennsylvania Sorghum, grain (milo) Sowthistle, annual Spanish needles 3 Spanish needles 3 Speedwell, corn Speedwell, purslane Speedwell, purslane Speedwell, purslane Sprangletop Goosegrass Spurge, annual Spurge, prostrate Henbit Horseweed/Marestail (Conyza canadensis) Spurry, umbrella Itchgrass Starthistle, yellow Johnsongrass, seedling	Coreopsis, plains/tickseed	Rocket, yellow
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Dwarf dandelion  Eclipta  Shattercane  False dandelion  Falseflax, smallseed  Fiddleneck  Filaree  Smartweed, ladysthumb  Fleabane, annual  Fleabane, rough  Foxtail  Foxtail, Carolina  Geranium, Carolina  Goatgrass, jointed  Goosegrass  Groundsel, common  Henbit  Horseweed/Marestail (Conyza canadensis)  Shattercane  Shattercane  Shattercane  Shepherd's-purse  Sicklepod  Signalgrass, broadleaf  Signalgrass, broadleaf  Smartweed, ladysthumb  Smartweed, Pennsylvania  Sorghum, grain (milo)  Sowthistle, annual  Spanish needles <sup>3</sup> Spanish needles <sup>3</sup> Foxtail, Carolina  Speedwell, corn  Speedwell, purslane  Speedwell, purslane  Sprangletop  Sprangletop  Spurge, annual  Spurge, prostrate  Henbit  Spurge, spotted  Horseweed/Marestail (Conyza canadensis)  Itchgrass  Starthistle, yellow  Johnsongrass, seedling	Crabgrass	Ryegrass
Eclipta Shattercane False dandelion Shepherd's-purse Falseflax, smallseed Sicklepod Fiddleneck Signalgrass, broadleaf Filaree Smartweed, ladysthumb Fleabane, annual Smartweed, Pennsylvania Fleabane, hairy (Conyza bonariensis) Sorghum, grain (milo) Fleabane, rough Sowthistle, annual Foxtail Spanish needles <sup>3</sup> Foxtail, Carolina Speedwell, corn Geranium, Carolina Speedwell, purslane Goatgrass, jointed Sprangletop Goosegrass Spurge, annual Groundsel, common Spurge, prostrate Henbit Spurge, spotted Horseweed/Marestail (Conyza canadensis) Itchgrass Starthistle, yellow Johnsongrass, seedling Stinkgrass	Cupgrass, woolly	Sandbur, field
False dandelion  Falseflax, smallseed  Fiddleneck  Fiddleneck  Filaree  Smartweed, ladysthumb  Fleabane, annual  Fleabane, hairy (Conyza bonariensis)  Fleabane, rough  Foxtail  Foxtail  Foxtail, Carolina  Geranium, Carolina  Goatgrass, jointed  Goosegrass  Groundsel, common  Henbit  Henbit  Horseweed/Marestail (Conyza canadensis)  Signalgrass, jelned  Signalgrass, proadleaf  Smartweed, ladysthumb  Smartweed, ladysthumb  Smartweed, ladysthumb  Smartweed, ladysthumb  Smartweed, ladysthumb  Smartweed, ladysthumb  Sorghum, grain (milo)  Sorghum, grain (milo)  Sowthistle, annual  Spanish needles <sup>3</sup> Speedwell, corn  Speedwell, corn  Speedwell, purslane  Sprangletop  Goosegrass  Spurge, annual  Groundsel, common  Spurge, prostrate  Henbit  Spurge, spotted  Horseweed/Marestail (Conyza canadensis)  Spurry, umbrella  Itchgrass  Starthistle, yellow  Johnsongrass, seedling	Dwarf dandelion	Sesbania, hemp
Falseflax, smallseed  Fiddleneck  Filaree  Smartweed, ladysthumb  Fleabane, annual  Fleabane, hairy (Conyza bonariensis)  Fleabane, rough  Foxtail  Foxtail  Foxtail, Carolina  Geranium, Carolina  Goatgrass, jointed  Goosegrass  Groundsel, common  Henbit  Henbit  Horseweed/Marestail (Conyza canadensis)  Signalgrass, broadleaf  Smartweed, ladysthumb  Smartweed, ladysthumb  Smartweed, ladysthumb  Smartweed, ladysthumb  Smartweed, ladysthumb  Smartweed, ladysthumb  Sorghum, grain (milo)  Sowthistle, annual  Spanish needles <sup>3</sup> Speedwell, corn  Speedwell, purslane  Sprangletop  Sprangletop  Goosegrass  Spurge, annual  Groundsel, common  Spurge, prostrate  Henbit  Horseweed/Marestail (Conyza canadensis)  Spurry, umbrella  Itchgrass  Starthistle, yellow  Johnsongrass, seedling	Eclipta	Shattercane
Fiddleneck  Filaree  Smartweed, ladysthumb  Fleabane, annual  Fleabane, hairy (Conyza bonariensis)  Fleabane, rough  Foxtail  Foxtail  Foxtail, Carolina  Geranium, Carolina  Goatgrass, jointed  Goosegrass  Groundsel, common  Henbit  Henbit  Horseweed/Marestail (Conyza canadensis)  Smartweed, ladysthumb  Sorghum, grain (milo)  Sowthistle, annual  Spanish needles <sup>3</sup> Speedwell, corn  Speedwell, purslane  Sprangletop  Sprangletop  Spurge, annual  Spurge, prostrate  Henbit  Spurge, spotted  Horseweed/Marestail (Conyza canadensis)  Spurry, umbrella  Itchgrass  Starthistle, yellow  Johnsongrass, seedling		Shepherd's-purse
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Fleabane, annual Fleabane, hairy (Conyza bonariensis) Sorghum, grain (milo) Fleabane, rough Sowthistle, annual Foxtail Foxtail Spanish needles <sup>3</sup> Foxtail, Carolina Speedwell, corn Geranium, Carolina Speedwell, purslane Goatgrass, jointed Sprangletop Goosegrass Spurge, annual Groundsel, common Henbit Spurge, prostrate Henbit Horseweed/Marestail (Conyza canadensis) Itchgrass Starthistle, yellow Johnsongrass, seedling Sorghum, grain (milo) Spaniul Spaniul Spaniul Spaniul Speedwell, purslane Sprangletop Spurge, annual Spurge, spotted Spurge, spotted Spurge, spotted Spurge, spotted	Fiddleneck	
Fleabane, hairy (Conyza bonariensis)  Fleabane, rough  Foxtail  Foxtail  Foxtail, Carolina  Geranium, Carolina  Goatgrass, jointed  Goosegrass  Groundsel, common  Henbit  Horseweed/Marestail (Conyza canadensis)  Itchgrass  Johnsongrass, seedling  Sowthistle, annual  Spanish needles 3  Speedwell, corn  Speedwell, purslane  Sprangletop  Sprangletop  Spurge, annual  Spurge, prostrate  Spurge, spotted  Spurge, spotted  Spurge, spotted  Spurge, spotted  Spurry, umbrella  Starthistle, yellow  Johnsongrass, seedling	Filaree	
Fleabane, rough  Foxtail  Foxtail  Foxtail, Carolina  Speedwell, corn  Geranium, Carolina  Goatgrass, jointed  Goosegrass  Groundsel, common  Henbit  Horseweed/Marestail (Conyza canadensis)  Itchgrass  Sowthistle, annual  Spanish needles 3  Speedwell, corn  Speedwell, purslane  Sprangletop  Sprangletop  Spurge, annual  Spurge, prostrate  Spurge, spotted  Spurge, spotted  Spurge, spotted  Spurry, umbrella  Itchgrass  Starthistle, yellow  Johnsongrass, seedling  Stinkgrass	Fleabane, annual	Smartweed, Pennsylvania
Foxtail Spanish needles <sup>3</sup> Foxtail, Carolina Speedwell, corn  Geranium, Carolina Speedwell, purslane  Goatgrass, jointed Sprangletop  Goosegrass Spurge, annual  Groundsel, common Spurge, prostrate  Henbit Spurge, spotted  Horseweed/Marestail (Conyza canadensis) Spurry, umbrella  Itchgrass Starthistle, yellow  Johnsongrass, seedling Stinkgrass	Fleabane, hairy (Conyza bonariensis)	Sorghum, grain (milo)
Foxtail, Carolina  Geranium, Carolina  Speedwell, purslane  Goatgrass, jointed  Sprangletop  Goosegrass  Spurge, annual  Groundsel, common  Spurge, prostrate  Henbit  Henbit  Horseweed/Marestail (Conyza canadensis)  Itchgrass  Starthistle, yellow  Johnsongrass, seedling  Speedwell, corn  Spurgle, prostrate  Spurge, spotted  Spurge, spotted  Spurry, umbrella  Starthistle, yellow  Stinkgrass	Fleabane, rough	
Geranium, Carolina  Goatgrass, jointed  Sprangletop  Goosegrass  Spurge, annual  Groundsel, common  Spurge, prostrate  Henbit  Horseweed/Marestail (Conyza canadensis)  Itchgrass  Starthistle, yellow  Johnsongrass, seedling  Speedwell, purslane  Spurge, prostrate  Spurge, spotted  Spurry, umbrella  Starthistle, yellow  Stinkgrass	Foxtail	Spanish needles <sup>3</sup>
Goatgrass, jointed Goosegrass Spurge, annual Groundsel, common Spurge, prostrate Henbit Spurge, spotted Horseweed/Marestail (Conyza canadensis) Itchgrass Starthistle, yellow Johnsongrass, seedling Spurge, spotted Spurry, umbrella Starthistle, yellow Stinkgrass	Foxtail, Carolina	
Goosegrass Spurge, annual Groundsel, common Spurge, prostrate Henbit Spurge, spotted Horseweed/Marestail (Conyza canadensis) Spurry, umbrella Itchgrass Starthistle, yellow Johnsongrass, seedling Stinkgrass	Geranium, Carolina	1 1 '1
Groundsel, common Spurge, prostrate Henbit Spurge, spotted Horseweed/Marestail ( <i>Conyza canadensis</i> ) Spurry, umbrella Itchgrass Starthistle, yellow Johnsongrass, seedling Stinkgrass	Goatgrass, jointed	
Henbit Spurge, spotted Horseweed/Marestail (Conyza canadensis) Spurry, umbrella Itchgrass Starthistle, yellow Johnsongrass, seedling Stinkgrass		Spurge, annual
Horseweed/Marestail (Conyza canadensis)  Itchgrass  Spurry, umbrella  Starthistle, yellow  Johnsongrass, seedling  Stinkgrass		
ItchgrassStarthistle, yellowJohnsongrass, seedlingStinkgrass		
Johnsongrass, seedling Stinkgrass	Horseweed/Marestail (Conyza canadensis)	
Junglerice Sunflower		
Knotweed / Prickly sida		
Kochia Thistle, Russian		
Lambsquarters Velvetleaf		
Lettuce, prickly Wheat		
Mannagrass, eastern Wild oats		
Mayweed Witchgrass	Mayweed	Witchgrass

- 1 For control of balsam apple, apply this product using handheld equipment only.
- 2 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.
- 3 For control of Spanish needles, apply 44 fluid ounces of this product per acre.

## **PERENNIAL WEEDS**

Enhanced 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 enhanced 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 4- to 7-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 15- to 30 percent solution of this product (19 to 38 fluid ounces of this product per gallon of spray solution) at a flow rate of 2 fluid ounces of spray solution per minute and a walking speed of 0.75 mile per hour (2 to 4 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

Perennial Weed Species	Broadcast Rate (quarts/acre)	Handheld Sprayer Concentration (%Solution)
Alfalfa*	1 – 1.5	1.5%
Alligatorweed*	3	1%
Apply this product when most of the target plants are in bloom. More than one application will be needed to achieve control.		
Anise (fennel)	1.3 – 2.7	1 – 1.5%
Bahiagrass	2 – 3.3	1.5%
Beachgrass, European (Ammophila arenaria)		3.5%

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. Enhanced 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 reseeding 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.

Bentgrass 1 1.5%

This product alone will provide only partial control of bentgrass (*Agrostis* spp.). For enhanced control, apply 1.6 to 2.2 quarts of this product in a tank-mix with labeled rate of Clethodim, Fluazifop-P-butyl, Fluazifop-P-butyl + Fenoxaprop-p-ethyl, or Sethoxydim in a spray volume of 20 to 40 gallons per acre using broadcast application equipment. For enhanced control using a handheld sprayer, apply this product at a concentration of 1.5 fluid ounces per gallon of a spray solution in a tank mix with labeled rate of Clethodim, Fluazifop-P-butyl + Fenoxaprop-p-ethyl, or Sethoxydim. More than one application might be needed for complete control.

Bermudagrass	3.3	1.5%
Make application when seedheads are present.		
Bermudagrass, water (knotgrass)	1	1.5%
Bindweed, field	2 – 3.3	1.5%

For control, apply 2.7 to 3.3 quarts of this product per acre as a broadcast application west of the Mississippi River and 2 to 2.7 quarts per acre east of the Mississippi River when bindweed is at or beyond full bloom. For enhanced results, apply in late summer or fall.

For control of oriental bittersweet, apply this product as a broadcast spray in 30 to 40 gallons of spray solution per acre. For enhanced results, ensure complete coverage of the target plant with the spray solution.

## Bluegrass, Kentucky 1.5 1.5%

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.

D	0.7.00	4.50/
Bluegrass, Texas	2.7 – 3.3	1.5%
Apply 2.7 to 3.3 quarts of this product per acre west of the Mississ		
east of the Mississippi River when most target plants are at or be	yond full bloom. For	r enhanced results,
apply in late-summer or fall.		
Brackenfern	2 – 3	1%
Apply to fully expanded fronds that are at least 18 inches long.		
Bromegrass, smooth	1.5	1%
Apply this product when most target plants have reached the boo		
application is made prior to the boot stage, reduced control can re-	sult. In the fall, make	e application before
plants have turned brown.		
Bursage, woolly-leaf		1.5%
Canarygrass, reed	1.5 – 2	1.5%
Apply this product when most target plants have reached the boo		
application is made prior to the boot stage, reduced control can re-	sult. In the fall, make	e application before
plants have turned brown.		
Cattail	2 – 3.3	1.5%
Apply this product when target plants are actively growing and a	re at or beyond the	early to full bloom
stage of development. Enhanced results are achieved when app	lication is made dur	ring the summer or
fall months.		
Clover; red, white	2 – 3.3 2 – 3.3	1.5%
Congongrass	2 – 3.3	1.5%
Apply this product in late-summer or fall when cogongrass is at le	ast 18 inches tall an	d actively growing.
Due to uneven stages of growth and the dense nature of co		
application might be necessary to achieve control.		
Dallisgrass	2 – 3.3	1.5%
Dandelion	2 – 3.3	1.5%
Dock, curly	2 – 3.3	1.5%
Dogbane, hemp	2.5	1.5%
Apply this product when most target plants have reached the la	ate-bud to flower sta	age of growth. For
enhanced results, make application in late-summer or fall.		0 0
Fescue (except tall)	3	1.5%
Fescue, tall	2	1.5%
Apply this product when most target plants have reached the bo	oot to head stage o	
prior to the boot stage, less than desirable control might be obtain		3 11
Guineagrass	2	1%
Apply this product when most target plants have at least reached	the 7-leaf growth st	
Hemlock, poison	1.3 – 2.7	1 – 1.5%
Control can also be achieved by injecting 5 milliliters of a 5-pe		
handheld injection device in one leaf cane per plant, 12 inches at		
Hogweed, giant		
Inject 5 milliliters of a 5-percent solution of this product into one le	af cane per plant 1	2 inches above the
root crown. 1	a. sano poi piant, i	
Horsenettle	2 – 3.3	1.5%
Horseradish	3	1.5%
Apply this product when most target plants have reached the lat		
For enhanced results, apply in late-summer or fall.	o saa to nower stat	jo or dovolopinont.
Horsetail, field		<u>-</u> -
Inject 0.5 milliliter of this product per stem directly into the plant ste	m one segment sho	ve the root crown 1
Iceplant	1.3	1.5 – 2%
•	1.3 – 2.7	1.5 – 2%
Ivy; cape, German		
Jerusalem artichoke Johnsongrass	2 – 3.3 1.3 – 2	1.5% 1%

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**Kikuyugrass** 1.5% Knapweed 1.5% Apply this product when most target plants have reached the late-bud to flower stage of growth. For enhanced results, apply in late-summer or fall. Knotweed; Bohemian, giant, Japanese 2.75 2% Apply 2.7 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 enhanced 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 0.36 fluid ounce (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. 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.1 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. 1.5% Lespedeza 2 - 3.31 – 1.5% Loosestrife, purple 1.75 Apply this product when most target plants are at or beyond the bloom stage of growth. Enhanced results are achieved when application is made during summer or fall months. Fall application must be made before a killing frost. 1.75 0.75% Lotus, American Apply this product when most target plants are at or beyond the bloom stage of growth. Enhanced 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. 1.5% Milkweed, common Apply this product when most target plants have reached the late-bud to flower stage of growth. Muhly, wirestem 1.5 1.5% Make application when most target plants are at least 8 inches in height (3- to 4-leaf stage of development) and actively growing. 2 - 3.31.5% Mullein, common **Napiergrass** 2 - 3.31.5% Nightshade, silverleaf 2 - 3.31.5% Apply 2.7 to 3.3 quarts of this product per acre as a broadcast application west of the Mississippi River and 2 to 2.7 quarts per acre east of the Mississippi River when most target plants are at or beyond full bloom. Enhanced results can be obtained when application is made in late-summer or fall after berries have formed. Nutsedge; purple, yellow 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. 1.5% **Orchardgrass** 1.5 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. **Papasgrass** 1 - 1.5%2 - 3.3Para grass 2 - 3.31.5%

More than one application of this product will be needed to achieve complete control. Allow plants to regrow to the 7- to10-leaf stage before making next application.

Pennerweed perennial 2.7 1.5%

Pepperweed, perennial	2.7	1.5%
Phragmites*	2 - 3.3	1 – 1.5%

For partial control of phragmites in Florida and the counties of other states bordering the Gulf of Mexico, apply 3.3 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 1.75 to 2.7 quarts per acre as a broadcast application or, for partial control, apply a 0.75-percent solution using a handheld sprayer. For enhanced 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.

Quackgrass	1.3 – 2	1.5%
Apply this product when most target plants are at least 8 in	ches in height (3-	to 4-leaf stage of
development) and actively growing.		

Redvine*	1.5	1.5%
Reed; common, giant	2.7 - 3.3	1.5%

For enhanced 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>

## **Ryegrass**, **perennial** 1.5 – 2 1%

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.

Smartweed, swamp	2 – 3.3	1.5%
Spatterdock	2.7	0.75%
Mala andiation when week to set aloute one in full blacks. The		

Make application when most target plants are in full bloom. For enhanced results, apply in the summer or fall.

Sowthistle, perennial	1.5 – 2	1.5%
Spurge, leafy*		1.5%
Starthistle, yellow	1.5	1.5%
Sweet potato, wild*		1.5%

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.

Thistle, artichoke	1.3 – 2	1 – 1.5%
Make application when target plants are at or beyond the bud stage of growth.		
Thistle, Canada	1.5 – 2	1.5%

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>

Timothy 1.5 – 2 1.5%

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.

Torpedograss*	2.7 – 3.3	1.5%
Trumpetcreeper*	1.5 – 2	1.5%
Tules, common		1.5%

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.

Vaseygrass	2 - 3.3	1.5%
Velvetgrass	2 – 3.3	1.5%
Wheatgrass, western	1.5 – 2	1.5%

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.

- \* Partial control
- 1 When using stem injection, the combined total use of this product must not exceed 7 quarts per acre per year. At 5 milliliters of concentrated (undiluted) product per stem, 7 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.

## **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.

Enhanced control of woody brush and trees is obtained when application is made in late-summer or fall after fruit formation; however, in arid areas, enhanced 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 enhanced 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 tank-mixed with other herbicides registered for the same use and timing. 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. 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.

#### **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 enhanced 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 of imazapyr 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 once) 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, enhanced 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 enhanced 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 4- to 8-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 A	ND VINES	RATE TARI E
WOOD I DRUSII.	INLLUE	MAD ANALO	DAIL IADLL

		Handheld
Species	Broadcast Rate	Sprayer
Species	(quarts/acre)	Concentration
		(%Solution)
Alder	2 - 3	1%
Ash*	1.5 – 3.3	1 – 1.5%
Aspen, quaking	1.5 - 2	1%
Bearmat (Bearclover)*	1.5 – 3.3	1 – 1.5%
Beech <sup>1</sup>	1.5 – 3.3	1 – 1.5%
Birch	1.5 - 2	1%
Blackberry	2 - 3	1%
Blackgum	1.5 – 3.3	1 – 1.5%
Bracken	1.5 – 3.3	1 – 1.5%
Broom; French, Scotch	1.3 – 3.3	1 – 1.5%
Buckwheat, California*	1.3 – 3.3	1 – 1.5%
Cascara*	1.5 – 3.3	1 – 1.5%
Castorbean	1.5 – 3.3	1 – 1.5%
Also for control, inject 4 milliliters of this concentrated (undilut	ted) product per plant	directly into the lower
portion of the main stem using a handheld injection device. 1		
Catsclaw*	_	1%
Ceanothus*	1.5 – 3.3	1 – 1.5%
Chamise*	1.3 – 3.3	1%
Cherry; bitter, black, pin	1.5 - 2	1%
Coyote brush	2 – 2.7	1 – 1.5%
For control, apply this product when at least 50 percent of the	e new leaves are fully	developed.
Deerweed	1.3 – 3.3	1%
Dogwood*	1.5 – 3.3	1 – 1.5%
Elderberry	1.5 - 2	1%
Elm*	1.5 – 3.3	1 – 1.5%
Eucalyptus	_	1.5%
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.		
Galberry	1.5 – 3.3	1 – 1.5%
Gorse*	1.5 – 3.3	1 – 1.5%
Hackberry, western	1.5 – 3.3	1 – 1.5%
Hasardia*	1.3 – 2.5	1 – 1.5%
Hawthorn	1.5 - 2	1%
Hazel	1.5 - 2	1%
Hickory*	1.5 – 3.3	1 – 1.5%
Honeysuckle	2 - 3	1%
Hornbeam, American*	1.5 – 3.3	1 – 1.5%
Ivy, poison	2.5 – 3.3	1.5%
Kudzu	2.5 – 3.3	1.5%

Locust, black*	1.5 - 3	1 – 1.5%
Madrone resprouts*	_	1.5%
Manzanita*	1.5 – 3.3	1 – 1.5%
Maple, red	1.5 - 3	1%
For control, apply a 1-percent solution of this product using		
developed. For partial control, apply 1.5 to 3 quarts per acre	as a broadcast applic	ation.
Maple, sugar	_	1%
For control, apply this product using a handheld sprayer whe	n at least 50 percent o	of the new leaves are
fully developed.		
Maple, vine*	1.5 – 3.3	1 – 1.5%
Monkey flower*	1.3 – 2.7	1 – 1.5%
Oak; black, white*	1.5 - 3	1 – 1.5%
Oak; northern, pin	1.3 – 2.7	1%
For control, apply this product when at least 50 percent of the	new leaves are fully	developed.
Oak, poison	2.5 – 3.3	1.5%
Repeat applications might be required to maintain control. A	pplication in the fall r	nust be made before
leaves lose green color.		
Oak, post	2 – 3	1%
Oak; red		1%
For control, apply this product using a handheld sprayer whe	n at least 50 percent o	of the new leaves are
fully developed.		
Oak, scrub*	1.3 – 2.7	1%
Oak, southern red	1.5 - 2	1%
Orange, Osage	1.2 – 3.3	1 – 1.5%
Peppertree, Brazilian (Florida holly)*	1.3 – 3.3	1 – 1.5%
Persimmon*	1.5 – 3.3	1 – 1.5%
Pine	1.5 – 3.3	1 – 1.5%
Poplar, yellow*	1.5 – 3.3	1 – 1.5%
Redbud, eastern	1.5 – 3.3	1 – 1.5%
Rose, multiflora	1.5	1%
Make application prior to leaf deterioration by leaf-eating inse		
Russian olive*	1.5 – 3.3	1 – 1.5%
Sage, black	1.3 – 2.7	1%
Sage, white*	1.5 – 2.7	1 – 1.5%
Sagebrush, California	1.3 – 2.7	1 – 1.5%
Salmonberry	1.5 - 2	1%
Saltcedar*	1.5 – 3.3	1 – 1.5%
For partial control, apply a 1- to 1.5-percent solution of this p		
3.3 quarts per acre as a broadcast application. For control,		
product with 0.25 percent by volume of imazapyr using a han		
application, apply 1.3 quarts of this product per acre in a tank		
less than 6 feet tall. To control saltcedar greater than 6 feet		
quarts of this product per acre in a tank-mix with labeled rate		,
Sassafras*	1.5 – 3.3	1 – 1.5%
Sourwood*	1.5 – 3.3	1 – 1.5%
Sumac; laurel, poison, smooth, sugarbrush, winged*	1.5 - 3	1 – 1.5%
Sweetgum	1.5 - 2	1%
Swordfern*	1.5 – 3.3	1 – 1.5%
Tallowtree, Chinese	_	1%
Tan oak resprouts*	_	1.5%
Thimbleberry	1.5 - 2	1%
Tobacco, tree*	1.5 – 2.5	1 – 1.5%
Toyon*	1.5 – 2.5	1.5%
Trumpetcreeper	1.5 - 2	1.5%
Humperdiechei	1.5 - 2	1 /0

Virginia creeper	1.5 – 3.3	1 – 1.5%
Waxmyrtle, southern*	1.5 – 3.3	1 – 1.5%
Willow	2 - 3	1%
Yerba santa, California*		1.5%
* Partial Control.		

## 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. Keep container closed to prevent spills and contamination. **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 labeled safeguards until container is cleaned, reconditioned, or destroyed.

#### **CONTAINER HANDLING:**

Nonrefillable Containers 5 Gallons or Less: 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. Offer for recycling, if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable containers larger than 5 gallons: 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. Offer for recycling, if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Pressure rinse as follows (all sizes):** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or 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.

Refillable containers 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 and, if possible, spray all sides while adding 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. After triple rinsing is complete, and the container is not suitable for refilling or reconditioning, offer the container for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded. The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the

use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of AXION AG PRODUCTS, LLC or Seller, TO THE EXTENT CONSISTENT WITH APPLICABLE LAW All such risks shall be assumed

by Buyer and User, and Buyer and User agree to hold AXION AG PRODUCTS, LLC and Seller harmless for any claims relating to such factors

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