

524-544

01/11/2007

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**MASTER LABEL FOR EPA REG. NO. 524-544**

Registered Brand Names:

**Roundup VM Herbicide  
RT 3 Herbicide**

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I. MAIN LABEL FOR FOOD CROP USES
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**[INSERT BRAND NAME]**

Herbicide

**Complete Directions for Use**

EPA Reg. No. 524-544

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY™ CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready® Crops.

The complete broad-spectrum postemergence herbicide for weed control in many agricultural systems.

Selective broad-spectrum weed control in Roundup Ready crops. Non-selective, broad-spectrum weed control for many agricultural systems and farmsteads.

Transorb™

CROPSHIELD™ Formulation

Powerful Performance at a Practical Price.

A member of the Roundup Family of Agricultural Herbicides by Monsanto

"The President's Green Chemistry Award was presented in 1996 to Monsanto for its innovative "zero-waste" process in the manufacture of Roundup Herbicide."

Not all products recommended on this label are registered for use in California. Check the registration status of each product in California before using.

Container Label Statement (5 gallons or smaller):
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This container is not to be sold to homeowners for residential use.
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Read the entire label before using this product.

Use only according to label instructions.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

Refillable Container Label Statement:
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THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. IT IS INTENDED THAT REPACKAGING BE ONLY IN ACCORDANCE WITH A MONSANTO REPACKAGING OR TOLL REPACKAGING AGREEMENT.
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Non-refillable Container Label Statement:
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THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

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**1.0 INGREDIENTS**

## ACTIVE INGREDIENT

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*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt.....	48.8%
OTHER INGREDIENTS: .....	51.2%
.....	100.0%

\*Contains 660 grams per liter or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per liter or 4.5 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent No's. 5,668,085 and 6,365,551. Other Patents Pending. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

1. FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE,

1-800-332-3111

2. IN CASE OF AN EMERGENCY INVOLVING THIS HERBICIDE PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314)-694-4000

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

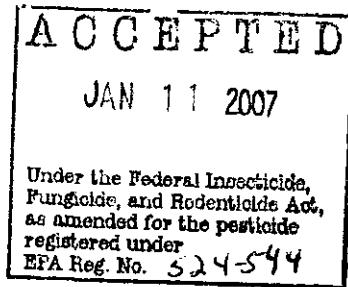
Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.

HARMFUL IF INHALED.

Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist.



<b>FIRST AID:</b> Call a poison control center or doctor for treatment advice.	
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses if present after the first 5 minutes then continue rinsing eye.</li> </ul>
<b>IF ON SKIN</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> </ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. This product is identified as <b>[INSERT BRAND NAME], EPA Registration No. 524-544</b> . You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information.	

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation 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.

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### Personal Protective Equipment (PPE)

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

**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, and chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

**Applicators, when handling only spray solutions where concentration is 30 percent of this product or less, 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.

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 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### User Safety Recommendations

Users should:

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

### 3.2 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.

### 3.3 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. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto supplemental labeling. Supplemental labeling can be found on the Internet at [www.cdms.net](http://www.cdms.net) or [www.greenbook.net](http://www.greenbook.net) or obtained from your Authorized Monsanto Retailer or Monsanto Company Representative.

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

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

**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 chemical-resistant gloves made of any waterproof material.

**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.

**4.0 STORAGE AND DISPOSAL**

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**PESTICIDE STORAGE:** 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 should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, State, or local procedures.

**CONTAINER DISPOSAL:** Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

See container label for additional CONTAINER DISPOSAL instructions.

[CONTAINER LABEL DISPOSAL STATEMENTS]

[FOR PLASTIC ONE-WAY CONTAINERS AND BOTTLES]

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Do not reuse container. Triple rinse the container, then puncture and place into a pesticide container recycling program, if available, or dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**[FOR ONE-WAY PLASTIC DRUMS]**

Do not reuse container. Return container per the Monsanto container return program. If not returned, triple rinse the container, then puncture and place into a pesticide container recycling program, if available, or dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**[FOR METAL CONTAINERS (non-aerosol)]**

Triple rinse the container (or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

**[FOR REFILLABLE PORTABLE (MINI-BULK) CONTAINERS]**

This container must only be refilled with pesticide product. **Do not reuse this container for any other purpose.**

Final disposal must be in compliance with State and local regulations. If not refilled, returned or recycled, triple rinse or pressure rinse, puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Do not transport this container if it is damaged or leaking. If this container is damaged, leaking or obsolete, or to obtain information about recycling portable refillable containers, contact Monsanto Company at 1-800-ROUNDUP (1-800-768-6387).

**Users:** When this container is empty, replace the cap and seal all openings that have been made during usage, and return the container to the point of purchase, or to an alternate location designated by the manufacturer at the time of purchase of this product. If not returned, triple rinse or pressure rinse the empty container and offer it for recycling, if available.

**Refillers:** Do not reuse this mini-bulk container except for refill in accordance with a valid Monsanto Agreement for Repackaging and Toll Repackaging. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, and worn-out threads and closure devices. Check for leaks after refilling and before transporting.

**[FOR REFILLABLE STATIONARY BULK CONTAINERS]**

This container must only be refilled with pesticide product. **Do not reuse this container for any other purpose.**

Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, and worn-out threads and closure devices.

Final disposal must be in compliance with State and local regulations. If not refilled, triple rinse or pressure rinse the container and offer for recycling or reconditioning, if possible. If burned, stay out of smoke.

**5.0 GENERAL INFORMATION  
(How This Product Works)**

**Product Description:** This product is a postemergence, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied



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through most standard industrial or field sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Do not add surfactants, additives containing surfactants, buffering agents or pH adjusting agents to the spray solution when **[INSERT BRAND NAME]** is the only pesticide used unless otherwise directed. See the "MIXING" section of this label for instructions regarding other additives.

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

**Stage of Weeds:** Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS RATE SECTION", "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH AND TREES RATE SECTION" for specific weed recommendations.

Always use the higher product application rate in the recommended range when weed growth is heavy or dense, or when weeds are growing in an undisturbed (non-cultivated) area.

Reduced weed control may result from treating weeds with disease or insect damage, weeds heavily covered with dust, or weeds under poor growing conditions.

**Cultural Considerations:** Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed or cut, and have not been allowed to regrow to the recommended stage for treatment.

**Rainfastness:** Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

**Spray Coverage:** For best results, spray coverage should be uniform and complete. Do not spray foliage to the point of run-off.

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

**No Soil Activity:** Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by this herbicide and will continue to grow.

**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 allowed 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 as tank mixtures, 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.

Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 5.3 quarts of this product (6 pounds of glyphosate acid) per acre per year. For

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applications in non-crop sites, or in tree, vine or shrub crops, the combined total of all treatments must not exceed 7 quarts of this product (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 have other unintended consequences.

**6.0 WEED RESISTANCE MANAGEMENT**

GROUP	9	HERBICIDE
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Glyphosate, the active ingredient in this product, is a Group 9 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group, or by using other cultural or mechanical practices.

**6.1 General Weed Management Recommendations**

To minimize the occurrence of glyphosate-resistant biotypes, observe the following general weed management recommendations:

- Scout your fields before and after herbicide applications.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small.
- Add other herbicides (e.g. a selective and/or a residual herbicide) and cultural practices (e.g. tillage or crop rotation) where appropriate.
- One method for adding other herbicides into a continuous Roundup Ready system is to rotate to other Roundup Ready crops.
- Utilize the recommended label rate for the most difficult to control weed in your field. Avoid tank mixtures with other herbicides that reduce this product's efficacy (through antagonism), or tank mixture recommendations that encourage application rates of this product below the label recommendations.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Use new commercial seed that is as free of weed seed as possible.
- Report any incidence of repeated non-performance of this product on a particular weed to your Monsanto representative, local retailer, or county extension agent.

**6.2 Management Recommendations For Glyphosate Resistant Biotypes**

**Note:** Appropriate testing is critical in order to determine if a weed is resistant to glyphosate. Call 1-800-ROUNDUP (1-800-768-6387) or contact your Monsanto representative to determine if resistance has been confirmed to any particular weed biotype in your area, or visit on the Internet [www.weedresistancemanagement.com](http://www.weedresistancemanagement.com) or [www.weedscience.org](http://www.weedscience.org). For more information see the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label.

Control recommendations for biotypes confirmed as resistant to glyphosate are made available on separately published supplemental labeling or fact sheets for this product and can be obtained from your local retailer or Monsanto representative.

Since the occurrence of new glyphosate resistant weeds cannot be determined until after product use and scientific confirmation, Monsanto Company is not responsible for any losses that may result from the failure of this product to control glyphosate-resistant weed biotypes.

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**The following good agronomic practices are recommended to reduce the spread of confirmed glyphosate resistant biotypes:**

- If a naturally occurring resistant biotype is present in your field, this product should be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices (e.g. crop rotation or tillage) may also be used as appropriate.
- One method for adding other herbicides into a continuous Roundup Ready system is to rotate to other Roundup Ready crops.
- Scout treated fields after herbicide applications and control escaping weeds including resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

### 7.0 MIXING

Spray solutions of this product should be mixed, stored and applied using only clean 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.**

**PRODUCT PERFORMANCE MAY 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.**

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.

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

#### 7.1 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 recommended amount of this product near the end of the filling process and mix gently. During mixing, foaming of the spray solution may occur. To prevent or minimize foaming, mix gently, terminate bypass and return lines at the bottom of the tank, and, if necessary, use an anti-foam or defoaming agent.

#### 7.2 Tank Mixtures

This product does not provide residual weed control. This product may be tank-mixed with other herbicides to provide residual weed control, a broader weed control spectrum or an alternate mode of action. Always read and follow label directions for all products in the tank mixture.

Some tank mixture products have the potential to cause crop injury under certain conditions, at certain growth stages and/or under other circumstances. Read all labels for products 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 may result in reduced weed control or crop injury and are NOT recommended for applications of this product unless otherwise noted in this product label, or in separate supplemental labeling or fact sheets published by Monsanto. Monsanto has not tested all tank-mix product formulations for compatibility, antagonism or reduction in product performance. Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with

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herbicides or other materials that are not expressly recommended in this labeling, or in separate supplemental labeling or fact sheets published by Monsanto for this product.

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

Refer to all individual product labels, supplemental labeling and fact sheets for all products in the tank mixture, and observe all precautions and limitations on the label, including application timing restrictions, soil restrictions, minimum re-cropping interval and rotational guidelines. Use according to the most restrictive precautionary statements for each product in the tank mixture.

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

For best results, it is recommended that tank mixtures with this product be applied at a minimum spray volume rate of 10 gallons per acre.

7.3 Tank-Mixing Procedure

Prepare tank mixtures of this product as follows:

1. Place a 20- to 35-mesh screen or wetting basket over the filling port of the tank.
2. Through the screen, fill the tank one-half full with water and start gentle agitation.
3. If ammonium sulfate is to be used, add it slowly through the screen into the tank and continue adding water into the tank through the screen. If dry ammonium sulfate is being used, ensure that it is completely dissolved in the tank before adding other products.
4. If a wettable powder is used, first make a slurry with water and add it SLOWLY through the screen into the tank while continuing gentle agitation.
5. If a flowable formulation is used, premix one part flowable with one part water and add diluted mixture SLOWLY through the screen into the tank while continuing gentle agitation.
6. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water and add diluted mixture SLOWLY through the screen into the tank while continuing gentle agitation.
7. Continue filling the tank with water through the screen and add the required amount of this product near the end of the filling process.
8. Add individual tank-mix components to the tank as follows: wettable powders, flowables, emulsifiable concentrates, drift reduction additives, water soluble liquids (this product).

Maintain gentle agitation at all times until the contents of the tank are sprayed out. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying. Keep by-pass and return lines on or near the bottom of the tank to minimize foaming.

Screen size in nozzle or line strainers should be no finer than 50 mesh.

7.4 Mixing for Hand-Held Sprayers

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

Spray Solution

Desired	Amount of [INSERT BRAND NAME]					
	0.4%	0.7%	1%	1.5%	4%	7%

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Volume						
1 gal	0.5 oz	1 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 backpack sprayers, it is recommended that the appropriate amount of this product be mixed with water in a larger container and then filling the sprayer with the mixed solution.

### 7.5 Ammonium Sulfate

The addition of 1 to 2 percent dry ammonium sulfate by weight, or 8.5 to 17 pounds per 100 gallons of water, may 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. The equivalent rate of ammonium sulfate in a liquid formulation 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 after use to reduce corrosion.

**NOTE:** When using ammonium sulfate, apply this product at rates recommended in this label. Lower rates will result in reduced performance.

### 7.6 Colorants or Dyes

Colorants or marking dyes may be added to spray solutions of this product; however, they can reduce product performance. Use colorants or dyes according to the manufacturer's recommendations.

### 7.7 Drift Reduction Additives

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

## 8.0 APPLICATION EQUIPMENT AND TECHNIQUES

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

This product may be applied with the following application equipment:

**Aerial**—Fixed-wing and helicopter

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

**Hand-Held or Backpack Equipment**—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**—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 that produce a spray consisting of a narrow range of droplet sizes

## I. MAIN LABEL FOR FOOD CROP USES

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING THE DESIRED VOLUMES.

### 8.1 Aerial Equipment

All labeled treatments may be made by aerial equipment where appropriate, provided that the applicator complies with the precautions and restrictions specified on this label and in separate supplemental labeling published by Monsanto for this product.

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS SPECIFIED IN THIS LABEL.

Use the recommended rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label, or in separate supplemental labeling or fact sheets published by Monsanto for this product. Unless otherwise specified, do not exceed 44 fluid ounces per acre using aerial spray equipment. Refer to the individual use area sections of this label for recommended volumes, application rates, and additional use instructions.

FOR AERIAL APPLICATION IN ARKANSAS AND CALIFORNIA, OR SPECIFIC COUNTIES THEREIN, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE OR COUNTY FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

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

When tank-mixing this product with 2,4-D, only 2,4-D amine formulations may be used for aerial application in California. Tank mixtures with 2,4-D amine formulations may be applied by air in California for fallow and reduced tillage systems, and for alfalfa and pasture renovation applications only.

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

### 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 should 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.

## I. MAIN LABEL FOR FOOD CROP USES

- **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 should 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

Applications should not occur during a temperature inversion because drift potential is high. 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.

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### **Sensitive Areas**

The product should 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.

### **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 MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413 may prevent corrosion.

### **8.2 Ground Broadcast Equipment**

Apply the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray, unless otherwise specified on this label, or in separate supplemental labeling or fact sheets published by Monsanto for this product. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzles to avoid generating a fine mist. For best results with ground application equipment, use flat spray nozzles. Check spray pattern for uniform distribution.

### **8.3 Hand-Held or Backpack Equipment**

Apply to foliage of vegetation to be controlled. Spray coverage should be uniform and complete. Use coarse sprays only. For applications made on a spray-to-wet basis, do not spray to the point of runoff. For recommended rates and timing, refer to the "ANNUAL WEEDS—HAND-HELD OR BACKPACK EQUIPMENT" section of this product label.

### **8.4 Selective Equipment**

This product may be diluted in water and applied through shielded sprayers, hooded sprayers, wiper applicators or sponge bars to weeds listed on this label growing in any non-crop site specified on this label.

In cropping systems, shielded sprayers, hooded sprayers, and wipers may be used in row middles (in between rows of crop plants). Wipers may be used over the top of crops only when specifically recommended in this label. Such equipment must be capable of preventing all crop contact with the herbicide solutions and operated without leakage of spray mists or dripping onto crop.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of this product with desirable vegetation may result in unwanted plant damage or destruction.

### **Shielded and Hooded Sprayers**

This product, when applied at recommended rates under the conditions described in the following paragraphs for shielded and hooded sprayers, will control those weeds listed in the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label. 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 from the spray solution. Adjust the shields on these sprayers to protect desirable vegetation. When applying to crops grown on raised beds, ensure that the hood is capable of completely enclosing the spray pattern. If necessary, extend the front and rear flaps of the hooded applicator downward to reach the ground in deep furrows. EXTREME CARE MUST BE TAKEN TO AVOID CONTACT OF THIS HERBICIDE WITH DESIRABLE VEGETATION.



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This equipment 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 may escape and come into contact with the crop, causing damage to or destruction of the crop. Avoid operating this equipment on rough or sloping terrain where the spray hood might be raised up off the ground surface.

Use hoods designed to minimize excessive dripping or run-off down the insides of the hoods. 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 is recommended. Spray volume should be 20 to 30 gallons per acre.

These procedures will reduce the potential for crop injury:

- Spray hoods must be operated 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, the maximum width of the spray hood should be 30 inches.)
- Operate at ground speeds of no greater than 5 miles per hour to avoid bouncing of the spray hoods.
- Apply when wind speeds are 10 miles per hour or less.
- Use low-drift nozzles that provide uniform coverage within the treated area.

Crop injury may occur when foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when crop leaves are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation may result in discoloration, stunting or destruction.

### **Wiper Applicators**

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation.

Application equipment used over the top of desirable vegetation should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds should be a minimum of 6 inches above the desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Weeds not contacted by the herbicide solution will not be affected. Poor contact may occur when weeds are growing in dense clumps, in severe weed infestations or when weed height varies dramatically. In these instances, repeat treatments may be necessary.

Operate this equipment at ground speeds no greater than 5 miles per hour. Performance may be improved by reducing speed in areas of heavy weed infestations to provide adequate wiper saturation with the herbicide solution. Better results may be obtained when two applications are made in opposite directions.

Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation may result in discoloration, stunting or destruction. Avoid leakage or dripping onto desirable vegetation. Keep wiping surfaces clean. Be aware that on sloping ground the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of the wiper applicator.

Do not use wiper applicators when weeds are wet.

Mix only the amount of this product to be used during a 1-day period, as reduced product performance may result from the use of solutions held in storage. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Do not add surfactant to the herbicide solution.

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**For Rope or 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.

**8.5 Injection Systems**

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

**8.6 CDA Equipment**

The rate of this product applied per acre by vehicle-mounted controlled droplet applicator (CDA) equipment must not be less than the amount recommended in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply in 2 to 15 gallons of water per acre.

For control of annual weeds with hand-held CDA units, apply a 20-percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 miles per hour (1 quart per acre). For the control of perennial weeds, apply a 20- to 30-percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mile per hour (2 to 3 quarts per acre).

Controlled droplet applicators produce a spray pattern that is not easily visible. Extreme care must be taken to avoid spray or drift from contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction of the plant may result.

**9.0 ANNUAL AND PERENNIAL CROPS (Alphabetical)**

**NOTE:** THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL CROPS LISTED ALPHABETICALLY IN THE SECTIONS THAT FOLLOW. SEE THE INDIVIDUAL CROP SECTIONS FOR SPECIFIC USE INSTRUCTIONS, PREHARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See the "ROUNDUP READY CROPS" section of this label, or separately published Monsanto supplemental labeling for this product, for instructions on applications in Roundup Ready crops.

**TYPES OF APPLICATIONS:** Chemical Fallow, Preplant Fallow Beds, Preplant, At-Planting, Preemergence, Hooded Sprayer in Row Middles, Shielded Sprayer in Row Middles, Wiper Application in Row Middles, Post-Harvest

**GENERAL USE INSTRUCTIONS:** Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or preemergence 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 specified, weed control applications may be made according to the rates listed in the "ANNUAL WEEDS RATE SECTION", "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH AND TREES RATE SECTION" of this label. Recommended rates of this product specified on this label for the control of tough weeds, or those specified on separate supplemental labeling for this product, supersede rates recommended in the "ANNUAL WEEDS RATE SECTION", "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH AND TREES RATE SECTION" of this label. Additional information on the control of tough weeds can be found in Fact Sheets published by Monsanto for this product.

Repeat applications may be made up to a maximum of 5.3 quarts of this product per acre per year.

Post-directed hooded sprayers and wiper applicators capable of preventing all crop contact with the herbicide solution may be used in mulched or unmulched row middles after crop establishment. Where specifically noted in the individual crop sections that follow, wipers may be used above

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## I. MAIN LABEL FOR FOOD CROP USES

certain crops to control tall weeds. Refer to the "SELECTIVE EQUIPMENT" section of this label for essential precautions regarding crop injury. Crop injury is possible with these types of applications, and shall be the sole responsibility of the applicator.

All labeled treatments may be made by aerial equipment where appropriate, provided that the applicator complies with the precautions and restrictions specified on this label and in separate supplemental labeling published by Monsanto for this product. Refer to the "AERIAL EQUIPMENT" section of this label for additional information.

**TANK MIXTURES:** This product may be tank-mixed with other herbicides to provide residual weed control, a broader weed control spectrum or an alternate mode of action. Always read and follow label directions for all products in the tank mixture. Use all products according to labeled rates. Some tank mixture products have the potential to cause crop injury under certain conditions, at certain crop growth stage and/or under other circumstances. Read all labels for products used in the tank mixture prior to use to determine the potential for crop injury. Always predetermine the compatibility of tank-mix products together in the carrier by mixing small proportional quantities in advance. A tank mixture of this product with other herbicides may cause incompatibility, antagonism, or a reduction in product efficacy. Monsanto has not tested all tank-mix product formulations for compatibility or performance. See the "MIXING" section of this label for more information on tank mixtures.

**GENERAL PRECAUTIONS, RESTRICTIONS:** 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 may result. When making at-planting and preemergence applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made 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 injury. Unless otherwise specified in this label, treatments with selective equipment, including wiper applicators 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 "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested. The crop receiving spray in the treated area will be killed. Take care not to spray or allow spray to drift outside the target area in order to avoid unwanted crop destruction.

For broadcast postemergence treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

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 "GENERAL INFORMATION" section of this label for more information on Maximum Application Rates.

### 9.1 Cereal and Grain Crops

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

**TYPES OF APPLICATIONS:** Those listed in Section 9.0, plus the following: Red Rice Control Prior to Planting Rice, Spot Treatment (except Rice), Wiper Application (Feed Barley and Wheat Only), Preharvest (Feed Barley and Wheat Only)

**PRECAUTIONS, RESTRICTIONS:** Do not treat rice fields or levees when flooded.

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## I. MAIN LABEL FOR FOOD CROP USES

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

USE INSTRUCTIONS: This product may be applied before, during or after planting of cereal crops. Applications must be made prior to crop emergence.

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

USE INSTRUCTIONS: Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application 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 may be only partially controlled.

PRECAUTIONS, RESTRICTIONS: Avoid spraying during conditions of low humidity, as reduced control may result. Do not treat rice fields or levees when the fields contain floodwater. Do not 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. Apply this product before heading in small grains.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. Crop sprayed in treated area will be killed. Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction.

### **Wiper Application (Feed Barley and Wheat Only)**

USE INSTRUCTIONS: This product may be applied over the top of feed barley and wheat with wiper applicators. To control common rye or cereal rye, apply after the 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.

PRECAUTIONS, RESTRICTIONS: 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 feed barley and wheat. For feed barley, apply after the hard-dough stage and when the grain contains 20 percent moisture or less. For wheat, apply after the hard-dough stage of grain (30 percent or less grain moisture). Stubble may be grazed immediately after harvest.

For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 22 fluid ounces of this product per acre. Allow 7 days between application and harvest or grazing. Preharvest application is not recommended for barley or wheat grown for seed, as a reduction in germination or vigor may occur.

### **Post-Harvest**

USE INSTRUCTIONS: This product may be applied after harvest of cereal crops. 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.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

## **9.2 Corn**

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

TYPES OF APPLICATIONS: Those listed in Section 9.0, plus the following: Spot Treatment, Preharvest

For use directions with Roundup Ready corn 2, see the "ROUNDUP READY CROPS" section of this label.

**Preplant, At-Planting, Preemergence**

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

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

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[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use preplant, at-planting and/or preemergence to corn: 2,4-D, alachlor, atrazine, acetochlor, carfentrazone-ethyl, clopyralid, dicamba, diflufenzopyr, dimethenamid, dimethenamid-p, flufenacet, flumetsulam, flumiclorac pentyl ester, isoxaflutole, linuron, metolachlor, s-metolachlor, metribuzin, pendimethalin, simazine.

Aim, Aim EC, Axiom, Balance, Balance PRO, Banvel, Bicep MAGNUM, Bicep II MAGNUM, Bullet, Clarity, Degree, Degree Xtra, Distinct, Dual MAGNUM, Dual II MAGNUM, Epic, Frontier, FulTime, Guardsman, Guardsman MAX, Harness, Harness Xtra, Harness Xtra 5.6L, Hornet, Keystone LA, Lariat, Leadoff, Linex, Lorox, Marksman, Micro-Tech, Prowl, Python, Resource, Shark, Simazine, Surpass, TopNotch]

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For tough-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 listed in this label, 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. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.

PRECAUTIONS, RESTRICTIONS: Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

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 this recommendation includes Illinois and Indiana south of Route 50, Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

**Hooded Sprayer**

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

PRECAUTIONS, RESTRICTIONS: Corn must be at least 12 inches tall, measured without extending leaves. Contact of this product in any manner to any vegetation to which treatment is not intended

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may cause damage. Such damage shall be the sole responsibility of the applicator. Do not apply more than 22 fluid ounces of this product per acre for each application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

**Spot Treatment**

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

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. Crop sprayed in the treated area will be killed. Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction.

**Preharvest**

USE INSTRUCTIONS: 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). For ground applications, apply up to 64 fluid ounces of this product per acre. For aerial applications, apply up to 44 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest. Preharvest application is not recommended for corn grown for seed, as a reduction in germination or vigor may occur.

**Post-Harvest**

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required to control 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 specific product being used in the tank mixture is registered for post-harvest application in corn. Read and follow label directions of all products in the tank mixture.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

**9.3 Cotton**

TYPES OF APPLICATIONS: Those listed in Section 9.0, plus the following: Selective Equipment, Spot Treatment, Preharvest

For use directions with Roundup Ready cotton and Roundup Ready Flex cotton, see the "ROUNDUP READY CROPS" section of this label.

**Preplant, At-Planting, Preemergence**

USE INSTRUCTIONS. This product may be applied before, during or after planting cotton. Applications must be made prior to crop emergence.

TANK MIXTURES: This product may be tank-mixed with the products listed below. Ensure that the specific product being used is labeled for application prior to planting cotton. Read and follow label directions for all products used in the tank mixture. Apply these tank mixtures in 10 to 20 gallons of water per acre.

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[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use preplant, at-planting and/or preemergence to cotton: 2,4-D, clomazone, dicamba, diuron, fluometuron, metolachlor, s-metolachlor, pendimethalin, norflurazon, prometryn, pyriithiobac-sodium.]

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Caparol, Clarity, Command, Cotoran, Cotton-Pro, Direx, Dual MAGNUM, Dual II MAGNUM, Karmex, Meturon, Prowl, Prowl H2O, Staple, Stalwart, Zorial]

**PRECAUTIONS, RESTRICTIONS:** Refer to individual tank mixture product labels for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the mixture.

#### **Selective Equipment**

**USE INSTRUCTIONS:** This product may be applied using hooded sprayers, shielded sprayers, or wiper applicators over the top of cotton. See additional instructions on the use of this selective equipment in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**PRECAUTIONS, RESTRICTIONS:** Allow at least 7 days between application and harvest.

#### **Spot Treatment**

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

**PRECAUTIONS, RESTRICTIONS:** Do not treat more than 10 percent of the total field area to be harvested. Crop sprayed in the treated area will be killed. Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction.

#### **Preharvest**

**USE INSTRUCTIONS:** This product provides weed control and cotton regrowth inhibition when applied prior to harvest. For weed control, apply at rates given in the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label. For cotton regrowth inhibition, apply 11 to 44 fluid ounces of this product per acre.

Up to 44 fluid ounces of this product may be applied. Apply after sufficient bolls have developed to produce the desired yield. Applications made prior to this time could affect maximum yield potential.

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

**PRECAUTIONS, RESTRICTIONS:** Allow a minimum of 7 days between application and harvest. Preharvest application is not recommended for cotton grown for seed, as a reduction in germination or vigor may occur. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

#### **9.4 Fallow Systems**

This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. For any crop not listed on this label, applications must be made at least 30 days prior to planting.

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

#### **Chemical Fallow**

**USE INSTRUCTIONS:** This product may be used as a substitute for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Tank-mix this product with 2,4-D or dicamba for a broader weed control spectrum. Applications up to 44 fluid ounces per acre may be made by aerial application onto fallow sites where there is sufficient buffer to prevent drift onto adjacent crops.

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**PRECAUTIONS, RESTRICTIONS:** Refer to individual tank mixture product labels for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

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

### **Preplant Fallow Beds**

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

**TANK MIXTURES:** Use 8 fluid ounces of this product, plus 2 to 3 fluid ounces of Goal™ 2XL, per acre to control the following weeds up to the maximum height or length indicated: 3 inches—common cheeseweed, chickweed, groundsel; 6 inches—London rocket, shepherd's-purse.

Use 11 fluid ounces of this product, plus 2 to 3 fluid ounces of Goal 2XL, per acre to control the following weeds up to the maximum height or length indicated: 6 inches—common cheeseweed, groundsel, marestail (*Coryza 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 crops listed on this label, 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. Make applications before weeds are 6 inches in height. Application must be followed by conventional tillage no later than 15 days after treatment and before regrowth occurs. Allow at least 1 day after application before tillage.

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

### **9.5 Grain Sorghum (Milo)**

**TYPES OF APPLICATIONS:** Those listed in Section 9.0, plus the following: Spot Treatment, Wiper Application, Preharvest

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

**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 crop emergence.

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

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[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use preplant, at-planting and/or preemergence to grain sorghum: atrazine, alachlor, s-metolachlor  
Bicep II MAGNUM, Bullet, Dual II MAGNUM, INTRRO, Lariat, Micro-Tech]

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For tough-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 a tank mixture of this product at 22 fluid ounces per acre plus one of the products listed above.



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For control of other annual weeds listed on this label, 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. When using nitrogen solutions as the carrier, the use rate may need to be increased to achieve adequate weed control.

**PRECAUTIONS, RESTRICTIONS:** Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

### **Spot Treatment, Wiper Application**

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

**PRECAUTIONS, RESTRICTIONS:** For spot treatment, do not treat more than 10 percent of the total field area to be harvested. Crop sprayed in the treated area will be killed. Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction.

For wiper applications, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated grain sorghum fodder. Do not ensile treated vegetation.

### **Hooded Sprayer**

**USE INSTRUCTIONS:** This product may be applied with hooded sprayers for weed control between the rows of grain sorghum. 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.

**PRECAUTIONS, RESTRICTIONS:** Grain sorghum must be at least 12 inches tall, measured without extending leaves. Treat before grain sorghum sends tillers between the drill rows. If tillers are sprayed with this herbicide, the main plant may be damaged or destroyed. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not graze or feed grain sorghum forage or fodder following applications of this product with hooded sprayers. Do not apply more than 22 fluid ounces of this product per acre per application, and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

### **Preharvest**

**USE INSTRUCTIONS:** This product may be applied for weed control prior to harvest after sorghum grain has reached 30 percent moisture or less.

**PRECAUTIONS, RESTRICTIONS:** Do not apply more than 44 fluid ounces of this product per acre. As with other herbicides that cause sudden plant death, avoid preharvest applications of this product to milo infected with charcoal rot as lodging can occur. Allow a minimum of 7 days between application and harvest of grain sorghum. Preharvest application is not recommended for sorghum grown for seed, as a reduction in germination or vigor may occur. The use of this product for preharvest grain sorghum (milo) is not registered in California.

### **Post-Harvest**

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

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This product may be applied to grain sorghum stubble following harvest to control or suppress regrowth. Apply 22 fluid ounces of this product per acre for control, or 16 fluid ounces of this product per acre for suppression.

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

9.6 Herbs and Spices

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

TYPES OF APPLICATIONS: Those listed in Section 9.0, plus the following: Wiper Application (Peppermint and Spearmint only), Spot Treatment (Peppermint and Spearmint Only)

PRECAUTIONS, RESTRICTIONS: This product could cause crop injury when applied prior to transplanting or direct-seeding crops into plastic mulch. Care must be taken to remove residual product from the plastic prior to planting. Residual product can be removed by a single 0.5-inch application of water, either by natural rainfall or by irrigation. Care should be taken to ensure that the washwater flushes off the plastic mulch and does not enter the transplant holes.

Wiper Application 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 with wiper applicators. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack sprayers, pump-up pressure sprayers, handguns, handwands or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS, RESTRICTIONS: Applications may be repeated in the same area at 30-day intervals. Allow at least 7 days between application and harvest. For spot treatment applications, do not treat more than 10 percent of the total field area to be harvested. Crop sprayed in the treated area will be killed. Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction. For wiper applications, droplets, mist, foam or splatter of the herbicide solution onto desirable vegetation may result in discoloration, stunting or destruction.

9.7 Oil Seed Crops

LABELED CROPS: Borage, Buffalo gourd (seed), Canola, Crambe, Flax, Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape, Safflower, Sesame, Sunflower

For use directions with Roundup Ready canola, see the "ROUNDUP READY CROPS" section of this label.

TYPES OF APPLICATIONS: Those listed in Section 9.0

USE INSTRUCTIONS: This product may be applied before, during or after planting oil seed crops listed in this section. Broadcast applications must be made prior to crop emergence. Wiper

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applicators or hooded sprayers may be used between the rows once the crop is established. See additional instructions on the use of wiper applicators and hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**TANK MIXTURES:** For sunflowers, a tank mixture with Prowl may be applied before, during or after planting into conventionally tilled soil, a cover crop, established sod or previous crop residue.

**PRECAUTIONS, RESTRICTIONS:** For use with canola, do not apply more than 44 fluid ounces of this product per acre. For use with sunflowers, do not apply more than 22 fluid ounces of this product per acre as a single preplant or preemergence application per year. Do not feed or graze sunflower forage following application of this product.

### 9.8 Soybeans

**TYPES OF APPLICATIONS:** Those listed in Section 9.0, plus the following: Spot Treatment, Preharvest, Selective Equipment

For use directions with Roundup Ready soybeans, see the "ROUNDUP READY CROPS" section of this label.

#### Preplant, At-Planting, Preemergence

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

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

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[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use preplant, at-planting and/or preemergence to soybeans: 2,4-D, alachlor, atrazine, carfentrazone-ethyl, chlorimuron ethyl, clomazone, cloransulam-methyl, dimethenamid, fenoxypyr, fluazifop-p-butyl, flufenacet, flumetsulam, flumiclorac pentyl ester, flumioxazin, fomesafen, imazaquin, imazethapyr, linuron, metolachlor, s-metolachlor, metribuzin, pendimethalin, sulfentrazone, tribenuron methyl, quizalofop P-ethyl.

Aim, Assure II, Axiom, Authority, Blanket, Boundary, Canopy, Canopy EX, Classic, Command, Command Xtra, Domain, Dual MAGNUM, Dual II MAGNUM, FirstRate, Flexstar, Frontier, Fusion, Gangster, Gauntlet, INTRRO, Lexone, Linex, Linuron, Lorox, Lorox Plus, Me-Too-Lachlor, Micro-Tech, Outlook, Pendimax, Prowl, Prowl H2O, Pursuit, Pursuit Plus, Python, Reflex, Resource, Scepter, Sencor, Squadron, Steel, Valor]

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For tough-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 listed on this label, 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.

**PRECAUTIONS, RESTRICTIONS:** Refer to individual tank mixture product label for restrictions and precautions, use according to the most restrictive precautionary statements for each product in the tank mixture.

#### Spot Treatment

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

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**PRECAUTIONS, RESTRICTIONS:** Do not treat more than 10 percent of the total field area to be harvested. Crop sprayed in the treated area will be killed. Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction.

### **Preharvest**

**USE INSTRUCTIONS:** This product may be applied to soybeans for weed control 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". Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

**PRECAUTIONS, RESTRICTIONS:** Do not apply more than 3.3 quarts of this product per acre for preharvest applications. Do not apply more than 44 fluid ounces of this product per acre by air. Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last preharvest application. (If the application rate is 22 fluid ounces per acre or lower, the grazing restriction is reduced to 14 days after last preharvest application.) Preharvest application is not recommended for soybeans grown for seed, as a reduction in germination or vigor may occur.

### **Selective Equipment**

**USE INSTRUCTIONS:** This product may be applied using shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. See additional instructions on the use of this selective equipment in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**PRECAUTIONS, RESTRICTIONS:** Allow at least 7 days between application and harvest.

## **9.9 Sugarcane**

**TYPES OF APPLICATIONS:** Those listed in Section 9.0, plus Spot Treatment

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

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

**PRECAUTIONS, 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 and spray-to-wet the foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.

**PRECAUTIONS, RESTRICTIONS:** Avoid spray contact with healthy sugarcane plants since severe damage or destruction may result. Do not feed or graze treated sugarcane foliage following application.

### **Fallow Treatment**

**USE INSTRUCTIONS:** This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane. 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. Applications up to 64 fluid ounces per acre may be made by aerial

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application in fallow sites where there is sufficient buffer to prevent drift onto adjacent crops. Tank mixtures with 2,4-D and dicamba may be used.

### **Hooded Sprayer**

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

**PRECAUTIONS, RESTRICTIONS:** Do not allow treated weeds to come into contact with the crop. Droplets, mist, foam or splatter of the herbicide solution settling onto the crop may result in discoloration, stunting or destruction. Such damage shall be the sole responsibility of the applicator.

### **9.9.1 Sugarcane Ripening**

This product is a foliar-applied plant growth regulator to hasten ripening and increase the level of sucrose in sugarcane. It is effective in both low- and high-tonnage sugarcane.

When applied as directed under the conditions described, this product will hasten ripening and extend the period of high sucrose level in sugarcane.

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

Most of the sucrose increase is concentrated in the top nodes of the treated cane stalk. To maximize sugar recovery where topping is practiced at harvest, top at the base of the fourth leaf.

Prior to application, consult your state sugarcane authority or local Monsanto representative regarding the degree of sucrose response anticipated from the variety of sugarcane to be treated. Do not plant subsequent crops in treated fields within 30 days after application other than the following: alfalfa or other forage legumes, beans (all types), corn (all types), cotton, melons (all types), pasture grasses, peanuts, potatoes (Irish or sweet), sorghum (milo), soybeans, squash (all types) or wheat.

**PRECAUTIONS, RESTRICTIONS:** Application of this product may initiate development of shooting eyes. This product may not increase the sucrose content of sugarcane under conditions of good natural ripening. Within 2 to 3 weeks after application, this product may produce a slight yellowing to pronounced browning and drying of leaves, and a shortening of upper internodes. Spindle death may occur.

Rainfall within 6 hours after application may reduce effectiveness.

Application is not recommended for sugarcane grown for seed, as a reduction in germination or vigor may occur.

Do not feed or graze treated sugarcane forage following application.

Do not apply for enhanced ripening to any crops other than sugarcane. 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.

### **APPLICATION RATES:**

Use the following application rates and timing instructions according to the State in which the sugarcane is grown.

**NOTE:** Use the higher rate within the recommended range when treating sugarcane under adverse ripening conditions or when less responsive varieties are to be treated.

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

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

**LOUISIANA**—Apply 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.

**9.10 Vegetable Crops**

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

**TYPES OF APPLICATIONS:** Chemical Fallow, Preplant Fallow Beds, Preplant, At-Planting, Preemergence, Prior to Transplanting Vegetables, Hooded Sprayer in Row Middles, Shielded Sprayer in Row Middles, Wiper Application in Row Middles, Post-Harvest, Directed Application (Non-Bearing Ginseng), Wiper Application (Rutabagas Only)

**PRECAUTIONS, RESTRICTIONS:** This product could cause crop injury when applied prior to transplanting or direct-seeding crops into plastic mulch. Care must be taken to remove residual product from the plastic prior to planting. Residual product can be removed by a single 0.5-inch application of water, either by natural rainfall or by irrigation. Care should be taken to ensure that the washwater flushes off the plastic mulch and does not enter the transplant holes. Applications made at 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, as severe crop injury or destruction may result. When making preemergence and at-planting applications, applications must be made before crop emergence 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, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development, otherwise severe crop injury or destruction may result. Unless otherwise specified in this label, treatments with 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 use in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**9.10.1 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

**9.10.2 Bulb Vegetables**

**LABELED CROPS:** Garlic, Great-headed garlic, Leek, Onion (dry bulb and green), Welsh onion, Shallot

**9.10.3 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

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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

**PRECAUTIONS, 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.

**9.10.4 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, Vine spinach, Swiss chard, Watercress (upland), Water spinach

**PRECAUTIONS, RESTRICTIONS:** For Watercress, avoid applications within 3 days prior to seeding, and during the period between seeding and emergence to minimize the risk of crop injury.

**9.10.5 Fruiting Vegetables**

**LABELED CROPS:** Eggplant, Groundcherry (*Physalis spp*), Pepino, Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato

**PRECAUTIONS, RESTRICTIONS:** For eggplant, ground cherry, pepper (all), and tomatillo, allow at least 3 days between application and planting. For tomato and tomatillo, do not make hooded or shielded sprayer applications in row-middles because of the potential for crop injury.

**9.10.6 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 Section 9.0, plus the following: Preharvest (Dry Beans Only) and Spot Treatment (Dry Beans Only)

**Preharvest (Dry Beans Only)**

**USE INSTRUCTIONS:** This product may be applied over the top of dry beans to control weeds listed on this label prior to harvest. Apply up to 22 fluid ounces of this product per acre in 3 to 20 gallons of water per acre at the hard dough stage of the legume seed (30 percent grain moisture or less).

**PRECAUTIONS, RESTRICTIONS:** Apply at least 7 days before harvest. Only one application per year may be made. Do not combine a preharvest spray with a spot treatment on the same crop area. Employ at least a 30-day plant-back interval between treatment and replanting for any crop not listed in this label. Preharvest application is not recommended for

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dry beans grown for seed, as a reduction in germination or vigor may occur. Do not treat cowpeas, since this crop is considered to be grown as livestock feed.

### **Spot Treatment (Dry Beans 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. Apply up to 22 fluid ounces of this product per acre in 10 to 20 gallons of water using ground spray equipment, or use a 2-percent solution in a hand-held sprayer. For best results, applications should be made at or beyond the bud stage of growth.

**PRECAUTIONS, RESTRICTIONS** Apply at least 7 days before harvest. Only one application may be made per year; Do not combine spot treatments with a preharvest broadcast spray on the same crop area. Observe at least a 30-day plant-back interval between treatment and replanting for any crop not listed in this label. Do not treat cowpeas, since this crop is considered to be grown as livestock feed.

Crop sprayed in the treated area will be killed. Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction.

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

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

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

**USE INSTRUCTIONS:** This product may be applied for general weed control in established non-bearing ginseng. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and backpack wands, lances, and orchard guns, or with wiper applicators. See additional use instructions for selective equipment in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**PRECAUTIONS, RESTRICTIONS:** Applications must be made at least one year prior to harvest. Direct applications so that there is no contact of this product with the ginseng plant.

### **Wiper Application (Rutabagas Only)**

**USE INSTRUCTIONS:** Wiper applicators may be used over the top of rutabagas for the control of tall weeds. See additional use instructions for wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**PRECAUTIONS, RESTRICTIONS:** Allow at least 14 days between application and harvest of rutabagas.

## **9.11 Miscellaneous Crops**

**LABELED CROPS:** Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar beet

**TYPES OF APPLICATIONS:** Those listed in Section 9.0, plus the following: General Weed Control, Site Preparation, Spot Treatment (Asparagus), Post-Harvest (Asparagus)

For use directions with Roundup Ready sugar beet, see the "ROUNDUP READY CROPS" section of this label.



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## I. MAIN LABEL FOR FOOD CROP USES

**PRECAUTIONS, RESTRICTIONS:** Avoid contact of this product 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 may result. When making preemergence and at-planting applications, applications must be made before crop emergence 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, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development, otherwise severe crop injury or destruction may result. Unless otherwise specified in this product's labeling, treatment with 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 information in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

### **General Weed Control, Site Preparation**

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

**PRECAUTIONS, RESTRICTIONS:** This product could cause crop injury when applied prior to transplanting or direct-seeding crops into plastic mulch. Care must be taken to remove residues of this product from the plastic prior to planting. Residual product can be removed by a single 0.5-inch application of water, either by natural rainfall or by irrigation. Care should be taken to ensure that the wash water flushes off the plastic mulch and does not enter transplant holes. Allow at least 21 days between residue removal and transplanting. Applications made at emergence will result in injury or death to emerged seedlings.

Do not apply within a week before the first asparagus spears emerge.

Do not feed or graze treated pineapple forage following application.

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

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

**PRECAUTIONS, 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 after the last harvest and all spears have been removed. If spears are allowed to regrow, delay application until ferns have developed. Delayed treatments should be applied as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears. See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**PRECAUTIONS, RESTRICTIONS:** Direct contact of the spray with asparagus may result in serious crop injury. Select and use recommended types of spray equipment for postemergence post-harvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.

## **10.0 TREE, VINE AND SHRUB CROPS (Alphabetical)**

**NOTE:** THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL TREE, VINE, AND SHRUB CROPS LISTED ALPHABETICALLY IN THE SECTIONS THAT FOLLOW. SEE THE INDIVIDUAL CROP SECTIONS FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

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## I. MAIN LABEL FOR FOOD CROP USES

**TYPES OF APPLICATIONS:** Preplant (Site Preparation) Broadcast Spray, General Weed Control, Middles (between rows of trees, vines or bushes), Strips (within rows of trees, vines or bushes), Selective Equipment (shielded sprayer, wiper applicator), Directed Spray, Spot Treatment, Perennial Grass Suppression, Cut Stump

This product may be applied with boom equipment, CDA equipment, shielded sprayers, hand-held and backpack wands, lances, orchard guns or with wiper applicator equipment, unless specifically prohibited in the specific crop sections that follow.

**GENERAL USE INSTRUCTIONS:** This product may be applied in middles (between rows of trees or vines), strips (within rows of trees or vines), and for general weed control or perennial grass suppression in established tree fruit and nut groves, orchards, berries 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 rates in the recommended range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7 quarts per acre per year. See the "GENERAL INFORMATION" section of this label for more information on Maximum Application Rates.

**GENERAL PRECAUTIONS, RESTRICTIONS:** 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 trees, canes and vines. Avoid applications when recent pruning wounds or other mechanical injury has occurred. Contact of this product with other than matured brown bark can result in serious crop damage or destruction. Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance. For applications in strips (within rows of trees), only selective equipment (directed spray, hooded sprayer, shielded applicator, or wiper) should be used in order to minimize the potential for overspray or drift of this product onto the crop. For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back. Only wipers or shielded applicators capable of preventing all contact with the crop may be used. See additional use instructions and precautions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

Allow a minimum of 3 days between application and transplanting.

### **Middles (between rows)**

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

**TANK MIXTURES:** A tank mixture of this product plus Goal 2XL may be applied for annual weed control in-between rows (middles) of citrus crops, tree fruits, tree nuts and vine crops when weeds are stressed or growing in dense populations. Application of 11 to 22 fluid ounces of this product, plus 3 to 12 fluid ounces of Goal 2XL, per acre will control annual weeds with a maximum height 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 mixture will also control common cheeseweed (malva) or hairy fleabane with a maximum height of 3 inches. Read and follow label directions for all products in the tank mixture.

### **Strips (in rows)**

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## I. MAIN LABEL FOR FOOD CROP USES

**TANK MIXTURES:** This product may be applied within rows of tree or vine crops in tank mixtures with the following products. Ensure that the specific product being used in the tank mixture is registered for this application. Read and follow label directions of all products in the tank mixture.

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[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use in strips (in rows) of tree, vine and shrub crops: bromacil, diuron, napropamide, norflurazon, oryzalin, oxyfluorfen, pendimethalin, simazine.

Devrinol 50-DF, Direx 4L, Goal 2XL, Karmex DF, Karmex II DF, Prowl, Princep Caliber 90, Simazine 4L, Simazine 80W, Sim-Trol 4L, Solicam DF, Surflan AS, Surflan 75W]

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**PRECAUTIONS, RESTRICTIONS:** Do not apply these tank mixtures in Puerto Rico. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

### **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 and vine 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 best 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 green-up 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**

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## I. MAIN LABEL FOR FOOD CROP USES

**USE INSTRUCTIONS:** Cut stump applications of this product may be made during site preparation or site renovation, prior to transplanting tree crops. This product will control regrowth of cut stumps and resprouts of many types of tree species, some of which are listed below.

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

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

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

Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50- to 100-percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

**PRECAUTIONS, RESTRICTIONS:** 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.

### 10.1 Berry Crops

**LABELED CROPS:** Blackberry (including bingleberry, black satin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, juneberry, lavacaberry, lowberry, lucretiaberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, and youngberry), Blueberry, Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Salal

**TYPES OF APPLICATIONS:** Those listed in Section 10.0, plus Spot Treatment in Cranberry Production and Post-Harvest Treatment in Cranberry Production

**GENERAL PRECAUTIONS, RESTRICTIONS:** To avoid damage, herbicide spray must not be allowed to contact desirable vegetation, including green shoots, canes or foliage. Allow a minimum of 30 days between last application and harvest of cranberries. Allow a minimum of 14 days between last application and harvest of other berry crops.

#### Spot Treatment in Cranberry Production

**USE INSTRUCTIONS:** Spot treatments may be made to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Hand-held sprayers or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. Drop water level to remove standing water in ditches prior to application. With hand-held sprayers, use a 1- to 1.5-percent solution of this product. Spray adequately to wet the vegetation only; do not spray to the point of run-off.

**PRECAUTIONS, RESTRICTIONS:** To achieve maximum weed control in treatment of dry ditches after water drawdown, allow 2 or more days after treatment before reintroduction of water. Apply this product within 1 day after drawdown to ensure application to actively growing weeds. Allow a minimum of 30 days between last application and harvest of cranberries. Do not make applications by air. Do not apply directly to water. Use nozzles that produce medium- to large-sized droplets in order to minimize spray drift and avoid crop injury.

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I. MAIN LABEL FOR FOOD CROP USES

**Post-Harvest Treatment in Cranberry Production**

USE INSTRUCTIONS: Application of this product may be made after the harvest of cranberries to control weeds growing in the field. Apply this product to vines that appear dormant (after they have turned red). Hand-held sprayers, wipers, or other appropriate application equipment listed in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label may be used for this use. If using hand-held sprayers, use a 0.4- to 0.7-percent solution of this product. Spray adequately to wet the vegetation only; do not spray to the point of run-off. If using hand-held boom sprayers, apply 44 to 86 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Make applications only after cranberries have been harvested. Do not treat more than 10 percent of the total bog. Allow a minimum of 6 months after last application and next harvest of cranberries. Do not make applications by air. Do not apply directly to water. Even though vines appear dormant, contact of the herbicide solution with desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.

**10.2 Citrus**

LABELED CROPS: Calamondin, Chironja, Citron, Citrus Hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (all), Pummelo, Satsuma Mandarin, Tangelo (ugli), Tangor

TYPES OF APPLICATIONS: Those listed in Section 10.0

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in citrus crops. For citron groves, apply as directed spray only.

The following use instructions pertain to applications in Florida and Texas only.

For burndown or control of the weeds listed below, apply the recommended 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.

For goatweed, apply 44 to 64 fluid ounces of this product in 20 to 30 gallons of water per acre when plants are actively growing. Use 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 Krovar I or Karmex may improve weed control.

Refer to the individual product labels for listing of specific crops, rates, geographic restrictions and precautionary statements.

**Perennial weeds:**

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

WEED SPECIES	[INSERT BRAND NAME] RATE PER ACRE			
	0.7 QT	1.3 QT	2 QT	3.3 QT
Bermudagrass	B	--	PC	C
Guineagrass				
Texas and Florida Ridge	B	C	C	C
Florida Flatwoods	--	B	C	C
Paragrass	B	C	C	C
Torpedograss	S	--	PC	C

**10.3 Miscellaneous Tree Food Crops**

I. MAIN LABEL FOR FOOD CROP USES

LABELED CROPS: Cactus (fruit and pads), Palm (heart, leaves), Palm (oil)

TYPES OF APPLICATIONS: Those listed in Section 10.0

**10.4 Non-Food Tree Crops**

LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas trees, All other non-food tree crops

TYPES OF APPLICATIONS: Those listed in Section 10.0

**NOTE:** Unless otherwise directed, this product is not recommended for use as an over-the-top broadcast spray in plantations or other labeled tree crops.

**Site Preparation**

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

PRECAUTIONS, RESTRICTIONS: Precautions should be taken to protect nontarget plants during site preparation applications

**Directed Spray, Spot Treatment, Wiper Application**

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

PRECAUTIONS, RESTRICTIONS: 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 materials.

**10.5 Pome Fruit**

LABELED CROPS: Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

TYPES OF APPLICATIONS: Those listed in Section 10.0

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in pome crops.

**10.6 Stone Fruit**

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

TYPES OF APPLICATIONS: Those listed in Section 10.0. For olive groves, apply only as directed spray.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 17 days between last application and harvest in stone fruit crops.

Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for 2 or more years. USE EXTREME CARE TO ENSURE THAT NO PART OF THE PEACH TREE IS CONTACTED WITH OVERSPRAY OR DRIFT OF THIS PRODUCT.

**10.7 Tree Nuts**

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 Section 10.0

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I. MAIN LABEL FOR FOOD CROP USES

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 3 days between last application and harvest of tree nuts, except coconut. Allow 14 days between application and harvest in coconut.

**10.8 Tropical and Subtropical Trees and Fruits**

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, Ilima, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebox (genip), Mountain papaya, 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 (roots and leaves), Wax jambu.

TYPES OF APPLICATIONS: Those listed in Section 10.0, and as described below as a Bananacide (Banana Only).

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in banana, guava, papaya, and plantain crops. Allow a minimum of 14 days between last application and harvest for any other tropical or subtropical tree fruit listed. Allow a minimum of 28 days between last application and harvest in coffee crops. In coffee and banana, delay applications 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 treatment area prior to treatment. Inject 0.04 fluid ounce (1 milliliter) of this product's concentrate per 2 to 3 inches of pseudostem diameter. 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. All plants and mats (or units) within a 4-foot radius around a treated mat should be mechanically destroyed.

For control of the Banana Bunchy Top Virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant 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.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 0.5 fluid ounce (15 milliliter) of this product per mat (or unit). Remove all fruit from plants and mats (or units) prior to treatment. 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 general weed control.

**10.9 Vine Crops**

LABELED CROPS: Grapes (raisin, table, wine), Hops, Kiwi, Passion fruit

TYPES OF APPLICATIONS: Those listed in Section 10.0

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

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 shielded sprayers or wiper equipment.

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I. MAIN LABEL FOR FOOD CROP USES

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 14 days between last application and harvest of vine crops. Do not use selective equipment in kiwi.

**11.0 PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS**

GENERAL USE INSTRUCTIONS: Refer to the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label for rate recommendations for specific weeds. When applied as directed, this product will control these annual and perennial grasses and broadleaf weeds. Recommended rates of this product specified on this label for the control of tough weeds, or those specified on separate supplemental labeling for this product, supersede rates recommended in the "ANNUAL WEEDS RATE SECTION", "PERENNIAL WEEDS RATE SECTION" and "WOODY BRUSH AND TREES RATE SECTION" of this label. Additional information on the control of tough weeds can be found in Fact Sheets published by Monsanto for this product.

**11.1 Alfalfa, Clover, and Other Forage Legumes**

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

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

For use directions with Roundup Ready alfalfa, see the "ROUNDUP READY CROPS" section of this label.

**Preplant, At-Planting, Preemergence**

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

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application.

**Spot Treatment, Wiper Application**

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

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total field area should be treated at one time. Remove domestic livestock before application and wait 3 days 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 established stands of any forage legumes listed in this section. Applications 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. Treatments for quackgrass must be followed by deep tillage for complete control. If the crop is to be harvested or grazed by livestock, use up to a maximum of 44 fluid ounces per acre in alfalfa and up to 32 fluid ounces per acre in all other legumes listed on this label. For complete removal of established stands of clover, it may be necessary to use higher application rates, as listed in the "PERENNIAL WEEDS RATE SECTION" of this label.

PRECAUTIONS, RESTRICTIONS: This application may destroy an alfalfa stand, and may severely injure or destroy other labeled crops such as clover. Remove domestic livestock before application.



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I. MAIN LABEL FOR FOOD CROP USES

Make only one application to an existing crop stand per year. The treated crop and weeds can be harvested and fed to livestock according to the application rates and intervals defined below. For application rates higher than those listed here, do not harvest for livestock feed or allow livestock to graze on treated foliage.

	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 in this label may be planted into the treated area at any time; all other crops may be planted 30 days after application. Preharvest application is not recommended for alfalfa grown for seed, as a reduction in germination or vigor may occur.

**11.2 Conservation Reserve Program (CRP)**

TYPES OF APPLICATIONS: Renovation (Rotating out of CRP), Site Preparation, Postemergence Weed Control in Dormant CRP Grasses, Wiper Application

**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 recommendations.

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

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

USE INSTRUCTIONS: Apply this product to suppress competitive growth and seed production of undesirable vegetation on CRP land. Applications may be made using wiper applicators to control tall weeds, or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray 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 applications can be made after desirable perennial grasses have reached dormancy.

PRECAUTIONS, RESTRICTIONS: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant. No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 2 quarts of this product per acre per year onto CRP land.

**11.3 Grass Seed or Sod Production**

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

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Renovation, Removal of Established Stands, Site Preparation, Shielded Sprayer, Wiper Application, Spot Treatment, Creating Rows in Annual Ryegrass

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

USE INSTRUCTIONS: This product controls most existing vegetation for purposes of renovating turf or forage grass seed areas, or for establishing turfgrass grown for sod. It may be used to destroy

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## I. MAIN LABEL FOR FOOD CROP USES

remaining undesirable grass vegetation when production fields are converted to alternate species or crops. Make applications before, during, or after planting, or for renovation purposes. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. 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. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as bermudagrass, summer or fall applications provide best control. Broadcast equipment 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 established stands of tough to kill grass species.

**PRECAUTIONS, RESTRICTIONS:** Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts. If application rates total 2 quarts 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 treated area at any time; all other crops may be planted 30 days after application. Applications must be made prior to crop emergence in order to avoid crop injury.

### **Shielded Sprayer**

**USE INSTRUCTIONS:** Apply 22 to 64 fluid ounces of this product in 10 to 20 gallons of water per acre to control weeds between grass seed rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are 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, RESTRICTIONS:** Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

### **Wiper Application**

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

**PRECAUTIONS, RESTRICTIONS:** Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation may result in discoloration, stunting or destruction. Such damage shall be the sole responsibility of the applicator.

### **Spot Treatment**

**USE INSTRUCTIONS:** Apply a 1-percent solution of this product using hand-held spray equipment to control weeds within established vegetation prior to heading of grasses grown for seed. Hand-held equipment may also be used to control sod remnants or other unwanted vegetation after sod is harvested.

**PRECAUTIONS, RESTRICTIONS:** Crop sprayed in the treated area will be killed. 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:** Apply 11 to 22 fluid ounces of this product per acre. Best results are obtained when applications are made before ryegrass reaches 6 inches in height. Use the higher rate within the recommended range when ryegrass is greater than 6 inches in height. Set nozzle heights to

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allow the establishment of the desired row spacing. Use of low-pressure nozzles or drop nozzles designed to target the application over a narrow band are recommended.

**PRECAUTIONS, RESTRICTIONS:** Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction.

**Grower assumes all responsibility for crop losses resulting from misapplication of this product.**

### 11.4 Pastures

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

**TYPES OF APPLICATIONS:** Preplant, Preemergence, Pasture Renovation, Spot Treatment, Wiper Application, Postemergence Weed Control (Broadcast Treatment).

#### **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 replanting.

**PRECAUTIONS, RESTRICTIONS:** If application rates total 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 treated area at any time; all other crops may be planted 30 days after application.

#### **Spot Treatment, Wiper Application**

**USE INSTRUCTIONS:** This product may be applied in pastures as a spot treatment, or over the top of desirable grasses using wiper applicators to control tall weeds. Applications may be repeated in 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.

**PRECAUTIONS, RESTRICTIONS:** For spot treatments or wiper application methods using rates of 2 quarts of this product per acre or less, the entire field or any portion of it may be treated. When spot treatments or wiper applications are made using rates above 2 quarts of this product per acre, no more than 10 percent of the total pasture may be treated at any one time. To achieve maximum performance, remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting for feed.

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

**USE INSTRUCTIONS:** This product may be applied to pastures to suppress competitive growth and seed production of annual weeds and undesirable vegetation. For selective applications with broadcast spray 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. Higher application rates to control tough-to-control weeds may be used, however, injury will occur if perennial grasses are no longer dormant. Late fall applications can be made after desirable perennial grasses have reached dormancy.

**PRECAUTIONS, RESTRICTIONS:** Some stunting of perennial grasses will occur if broadcast applications are made when plants are not dormant. Use of higher application rates will cause stand reductions. No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 2 quarts per acre per year onto pasture grasses except for renovation uses as

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described previously in this section. If replanting is needed due to severe stand reduction, wait 30 days after application before planting any crop not listed on this label.

### 11.5 Rangelands

TYPES OF APPLICATIONS: Postemergence

USE INSTRUCTIONS: This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands.

Preventing weed seed production is critical to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds.

Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

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 rangelands. Apply when most brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Fall applications are recommended where spring moisture is usually limited and fall germination allows for good weed growth.

For 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 may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses in medusahead-dominated rangelands.

PRECAUTIONS, RESTRICTIONS: Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off. Do not use ammonium sulfate when spraying rangeland grasses with this product. No waiting period between treatment and feeding or livestock grazing is required. Do not apply more than 2 quarts of this product per acre per year.

### 12.0 ROUNDUP READY CROPS

ROUNDUP READY CROPS CONTAIN A PATENTED GENE THAT PROVIDES TOLERANCE TO GLYPHOSATE, THE ACTIVE INGREDIENT IN THIS PRODUCT. THIS PRODUCT WILL CAUSE SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS IF APPLIED TO CROPS THAT ARE NOT GLYPHOSATE TOLERANT. AVOID CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT DO NOT CONTAIN A GLYPHOSATE TOLERANCE GENE, SINCE SEVERE PLANT INJURY OR DESTRUCTION WILL RESULT. Information on Roundup Ready crops may be obtained from your seed supplier or Monsanto representative. Roundup Ready crops must be purchased from an authorized licensed seed supplier.

The instructions in the sections that follow, or those published separately on Monsanto supplemental labeling for this product, include all applications of this product that may be made onto the specified Roundup Ready crops during the complete cropping season. DO NOT combine these instructions with other instructions for crops in the "ANNUAL AND PERENNIAL CROPS (ALPHABETICAL)" and "PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS" sections of this label, that do not contain a glyphosate tolerance gene.

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## I. MAIN LABEL FOR FOOD CROP USES

**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. A license to use Roundup Ready seed must be obtained prior to use. Monsanto retains ownership of the gene and process technologies, and the Purchaser of the seed receives the right to use the licensed genes and technologies subject to the limited use license conditions. Seed containing a Roundup Ready trait cannot be used for research and demonstration, reverse engineering or in connection with herbicide registration. Progeny seed containing a Roundup Ready trait may not be saved for replanting or transferred to others for replanting. Contact your Authorized Monsanto Retailer for information on obtaining a limited use license.

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

**For ground broadcast applications**—Apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat spray nozzles. Check for even distribution of spray droplets.

**For aerial applications**—All labeled treatments may be made by aerial equipment where appropriate, provided that the applicator complies with the precautions and restrictions specified on this label, particularly, in the "AERIAL EQUIPMENT" section, and on all separately published supplemental labeling. Apply this product in 3 to 15 gallons of water per acre. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for procedures on avoiding spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

For proper stewardship of aerial applications over the top of Roundup Ready crops, Monsanto recommends that growers and applicators read and follow all precautions and procedures contained in the use guide, "A Guide to On-Target Aerial Application." Copies of this publication are available by calling 1-800-ROUNDUP (1-800-768-6387).

**ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANCE GENE.**

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 with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control or crop injury, and are NOT recommended for postemergence (in-crop) applications of this product over the top of Roundup Ready crops, unless otherwise noted in this product label, or in separate supplemental labeling or fact sheets published by Monsanto for this product. Always read and follow label directions for all products in the tank mixture. Use all products according to labeled rates. Some tank mixture products have the potential to cause crop injury under certain conditions, at certain crop growth stage and/or under other circumstances. Read all labels for products used in the tank mixture prior to use to determine the potential for crop injury. Always predetermine the compatibility of tank-mix products together in the carrier by mixing small proportional quantities in advance. A tank mixture of this product with other herbicides may cause incompatibility, antagonism, or a reduction in product efficacy. Monsanto has not tested all tank-mix product formulations for compatibility or performance. See the "MIXING" section of this label for more information on tank mixtures.

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I. MAIN LABEL FOR FOOD CROP USES

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING" section of this label for instructions on the use of ammonium sulfate.

**Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product. 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.

**NOTE:** The following recommendations 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, a preplant burndown treatment with this product is recommended to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times, or suppressed (stunted) weeds, may require a second application of this product for complete control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

Recommended rates of this product specified in this label for the control of tough weeds, or those specified on separate supplemental labeling for this product, supersede rates recommended in the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label. Additional information on the control of tough weeds can be found in Fact Sheets published by Monsanto for this product.

**GENERAL PRECAUTIONS, 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 "GENERAL INFORMATION" section of this label for more information on Maximum Application Rates.

**12.1 Roundup Ready Alfalfa**

**TYPES OF APPLICATIONS:** Preplant, At-planting, Preemergence, Postemergence (In-crop)

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

<b>Maximum Application Rates</b>	
Combined total per year for all applications, including preplant during year of establishment	5.3 quarts per acre
Combined total per year for in-crop applications for newly established and established stands	4.1 quarts per acre (132 fluid ounces per acre)
Preplant, At-planting and Preemergence single applications	44 fluid ounces per acre

**GENERAL PRECAUTIONS AND RESTRICTIONS:** See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. See the "GENERAL INFORMATION" section of this label for more information on Maximum Application Rates.

**Preplant, At-Planting, Preemergence**

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I. MAIN LABEL FOR FOOD CROP USES

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

**Postemergence (In-crop)**

USE INSTRUCTIONS. Applications of this product may be made over the top of Roundup Ready alfalfa (in-crop) from emergence until 5 days prior to cutting. To maximize crop yield and quality potential of forage and hay, applications of this product should be made 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 "PERRENIAL WEEDS RATE SECTION" in this label for rate recommendations for specific weeds. When applied as directed, this product will control these annual and perennial grasses and broadleaf weeds. In addition to those weeds listed in these sections, this product will suppress or control the parasitic weed Dodder (*Cuscuta spp.*) in Roundup Ready alfalfa. Repeat applications may 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 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, a single application of at least 22 fluid ounces per acre of this product should be applied at or before the 4-trifoliate growth stage. Refer to the following table for application rates during stand establishment (seeding year).

<b>NEW STAND ESTABLISHMENT (Seeding Year)</b>	
Application Rates	
<b>Prior to First Cutting</b>	
From emergence up to 4 trifoliate leaves	22 to 44 fluid ounces per acre
From 5 trifoliate leaves up to 5 days before <i>first</i> cutting	Up to 44 fluid ounces per acre
<b>After First Cutting</b>	
In-crop application, per cutting, up to 5 days before cutting	Up to 44 fluid ounces per acre

**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).

<b>ESTABLISHED STANDS (Non-seeding Year)</b>	
Application Rates	
In-crop applications, per cutting, up to 5 days before cutting	Up to 44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: Where Roundup Ready alfalfa is grown with a companion or cover crop, or is overseeded with a second species, in-crop (over-the-top) applications of this product will eliminate the non-Roundup Ready (non-glyphosate tolerant) species. Any single in-crop application of this product should not exceed 44 fluid ounces per acre. Sequential applications of this product should be at least 7 days apart. The combined total per year for all in-crop applications in both newly established (seeding year) and established stands (non-seeding year) must not exceed 4.1 quarts (132 fluid ounces) per acre. Remove domestic livestock before application. Wait a minimum of 5 days after last application before grazing, or cutting and feeding of forage and hay.

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TANK MIXTURES: This product may be tank-mixed with the products listed below. Ensure that the specific product being used is labeled for application to alfalfa. Read and follow label directions for all products in the tank mixture.

**Newly Seeded Stands and Stand Establishment:** For control of emerged annual grasses and broadleaf weeds, this product may be applied at up to 44 fluid ounces per acre in a tank mixture with the following herbicides. Application should be made after weeds have emerged but before the alfalfa growth or regrowth would interfere with spray coverage of the target weeds.

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use on alfalfa: 2,4-DB, bromoxynil, clethocim, imazamox, imazethapyr, sethoxydim.

Arrow, Buctril, Butoxone, Butyrac, Poast, Prism, Pursuit, Raptor, Select.

Buctril can only be used in newly seeded stands; crop injury is likely with this product.]

**Dormant Application and Winter Treatment:** For control of emerged annual grasses and broadleaf weeds, this product may be applied at up to 44 fluid ounces per acre in a tank mixture with the following herbicides. This product in a tank mixture should be applied when the temperature for the day remains above freezing.

Dormant Application

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use on alfalfa: diuron, hexazinone, imazamox, metribuzin, pronamide, terbacil.

Kerb 50-W, Lexone, Raptor, Sencor, Sinbar, Velpar AlfaMax.

Winter Treatment

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use on alfalfa: 2,4-DB, diuron, hexazinone.

Butoxone, Diruon, Velpar AlfaMax.

PRECAUTIONS, RESTRICTIONS: Tank mixtures of this product with herbicides, insecticides, or fungicides may result in crop injury or reduced weed control. Applications should not be made to frozen or snow covered ground.

**12.2 Roundup Ready Canola (Spring)**

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

**DO NOT USE THIS PRODUCT ON SPRING CANOLA WITH A ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA, EXCEPT FOR USES IN WILDLIFE FOOD PLOTS THAT WILL NOT BE HARVESTED FOR HUMAN OR LIVESTOCK FOOD.**

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop)

GENERAL USE INSTRUCTIONS: Refer to the following table for the maximum application rates for this product with Roundup Ready canola (spring).



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I. MAIN LABEL FOR FOOD CROP USES

Maximum Application Rates	
Total of all Preplant, At-Planting, Preemergence applications	44 fluid ounces per acre
Total of all In-crop Applications from emergence to 6-Leaf Stage	22 fluid ounces per acre

GENERAL PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. See the "GENERAL 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 spring canola.

PRECAUTIONS, 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 season.

**Postemergence (In-crop)**

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready spring canola from emergence through the 6-leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.

**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 may result in temporary yellowing, delayed flowering, and or growth reduction. Similar crop injury may result when applications of more than 11 fluid ounces per acre are applied after the 4-leaf stage.

**Sequential Application**—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 are recommended for early emerging annual weeds and perennial weeds such as Canada thistle and quackgrass, or when multiple applications are needed for adequate weed control.

PRECAUTIONS, 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 should not exceed 22 fluid ounces of this product per acre. Allow a minimum of 60 days between last application and canola harvest.

**12.3 Roundup Ready Canola (Winter)**

Roundup Ready Winter Canola is defined as those Roundup Ready 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.

**DO NOT USE THIS PRODUCT ON CANOLA WITH A ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA, EXCEPT FOR USES IN WILDLIFE FOOD PLOTS THAT WILL NOT BE HARVESTED FOR HUMAN OR LIVESTOCK FOOD.**

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop)

I. MAIN LABEL FOR FOOD CROP USES

GENERAL USE INSTRUCTIONS: Refer to the following table for the maximum application rates of this product with Roundup Ready canola (winter).

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

GENERAL PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. See the "GENERAL INFORMATION" section of this label for information on Maximum Application Rates.

**Preplant, At-Planting, Preemergence**

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

PRECAUTIONS, 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 season.

**Postemergence (In-crop)**

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

Some weeds with multiple germination times, or suppressed (stunted) weeds, or weeds that have overwintered may require sequential applications of this product for control. The second application should be made after some regrowth has occurred and at least 60 days after a previous application of this product.

**Single Application**—Apply 16 to 22 fluid ounces of this product per acre in the fall. Applications in the fall should be made when weeds are small and actively growing. Use the higher rate in the recommended range when weed densities are high, when weeds have overwintered or when weeds become large and well established. Applications of greater than 16 fluid ounces per acre prior to the 6-leaf stage may result in reduced crop growth in the fall. Avoid spray overlaps. Spray overlaps may 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 are recommended 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 applications may be required to reduce competition with the crop.

PRECAUTIONS, 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. Applications of greater than 16 fluid ounces per acre prior to the 6-leaf stage may result in reduced crop growth in the fall. 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.

**12.4 Roundup Ready Corn 2**

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I. MAIN LABEL FOR FOOD CROP USES

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

GENERAL USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready Corn 2.

Maximum Application Rates	
Combined total per year for all applications	5.3 quarts per acre
Total of all Preplant, At-Planting, Preemergence applications	3.3 quarts per acre
Total of all In-crop applications from emergence through 48-inch corn	64 fluid ounces per acre (32 fluid ounces per acre per application)
Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest*	22 fluid ounces per acre

\*See PRECAUTIONS, RESTRICTIONS section for Preharvest applications

GENERAL PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The maximum combined total amount of this product that may be applied per year is 5.3 quarts per acre. See the "GENERAL INFORMATION" section of this label for information on Maximum Application Rates. **The use of the in-crop (over-the-top) rates described in these instructions on other than Roundup Ready Corn 2 may 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 Roundup Ready Corn 2.

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

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use preplant, at-planting and/or preemergence to corn: 2,4-D, acetochlor, alachlor, atrazine, carfentrazone-ethyl, clopyralid, dicamba, diflufenzopyr, dimethenamid, dimethenamid-p, flufenacet, flumetsulam, flumiclorac pentyl ester, isoxaflutole, linuron, metolachlor, s-metolachlor, metribuzin, pendimethalin, rimsulfuron.

Aim, Aim EC, Axiom, Balance, Balance PRO, Banvel, Bicep MAGNUM, Bicep II MAGNUM, Bicep Lite II MAGNUM, Bullet, Cinch, Cinch ATZ, Clarity, Define, Degree, Degree Xtra, Distinct, Dual II MAGNUM, Epic, Frontier, FulTime, Guardsman MAX, Harness, Harness Xtra, Harness Xtra 5.6L, Hornet, Keystone, Keystone LA, Lariat, Linex, Lorox, Marksman, Me-Too-Lachlor II, Micro-Tech, Prowl, Python, Python II, Radius, Resolve, Resource, Shark, Stalwart, Stalwart Xtra, Surpass, TopNotch]

PRECAUTIONS, 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.

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I. MAIN LABEL FOR FOOD CROP USES

Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for 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 the preemergence residual products listed above.

**Postemergence (In-crop)**

**USE INSTRUCTIONS** This product may be applied alone or in tank mixtures over the top of corn hybrids designated as Roundup Ready Corn 2 from emergence through the V8 stage (8 leaves with collars), or until corn height reaches 30 inches (free standing), whichever comes first. Drop nozzles are recommended for optimum spray coverage and weed control when corn height is 24 to 30 inches. For corn heights 30 to 48 inches (free standing), apply this product **only** using ground application equipped with drop nozzles aligned to avoid spraying into the whorls of the corn plants. Single in-crop applications of this product up to 48 inch corn must not exceed 32 fluid ounces per acre. Sequential in-crop applications of this product from emergence through 48 inches in height must not exceed 64 fluid ounces per acre per growing season.

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 application of this product. A postemergence application of 16 to 22 fluid ounces of this product per acre should be made before weeds exceed 4 inches in height, or, generally, before they become competitive with the crop. If new flushes of weeds occur, a sequential application of this product at 16 to 22 fluid ounces per acre should be made before weeds exceed 4 inches in height.

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

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use postemergence (in-crop) to corn: 2,4-D, atrazine, acetochlor, alachlor, carfentrazone-ethyl, clopyralid, dicamba, diflufenzopyr, flumetsulam, flumiclorac pentyl ester, foramsulfuron, halosulfuron-methyl, iodosulfuron-methyl-sodium, mesotrione, nicosulfuron, rimsulfuron, thifensulfuron methyl.

Aim EC, Banvel, Basis, Basis Gold, Bullet, Callisto, Clarity, Degree, Degree Xtra, Distinct, Equip, Harness, Harness Xtra, Harness Xtra 5.6L, Hornet, Marksman, Micro-Tech, Option, Resolve, Resource, Shark, YUKON]

Tank-mix Partner	Maximum Height Of Corn At Application
Degree Degree Xtra Harness Harness Xtra Harness Xtra 5.6L	11 inches
Bullet* Micro-Tech*	5 inches
atrazine	12 inches

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

I. MAIN LABEL FOR FOOD CROP USES

PRECAUTIONS, 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. Refer to individual tank mixture product label for restrictions and precautions, use according to the most restrictive precautionary statements for each product in the tank mixture.

**Preharvest**

USE INSTRUCTIONS: This product may be applied for annual and perennial weed control prior to harvest at use rates up to 22 fluid ounces per acre. 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).

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest or feeding of corn stover or grain. A preharvest application may **only** be made 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.

**Post-Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after crop harvest. 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.

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

**12.5 Roundup Ready Cotton**

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

GENERAL USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready cotton.

<b>Maximum Application Rates</b>	
Combined total per year for all applications	5.3 quarts per acre
Total of all Preplant, At-Planting, Preemergence applications	3.3 quarts per acre
Total of all In-crop applications from ground cracking to layby	2.5 quarts per acre
Maximum Preharvest application rate	44 fluid ounces per acre
Combined total of all In-crop applications from emergence through harvest	4 quarts per acre

GENERAL PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application of this product from cotton emergence through harvest must not exceed 4 quarts per acre. Allow a minimum of 7 days between application and harvest. See the "GENERAL 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 cotton.

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## I. MAIN LABEL FOR FOOD CROP USES

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

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[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use prior to the emergence of cotton: diuron, fluometuron, metolachlor, s-metolachlor, pendimethalin, prometryn, pyriithiobac-sodium.

Caparol, Cotoran, Direx, Dual MAGNUM, Prowl H2O, Stalwart, Staple]

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**PRECAUTIONS, 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. Refer to individual tank mixture product label for restrictions and precautions. Use according to the most restrictive precautionary statements for each product in the tank mixture.

### Postemergence (In-crop)

**USE INSTRUCTIONS:** This product may be applied over the top of Roundup Ready cotton (in-crop) at rates up to 22 fluid ounces per acre per application from ground cracking until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). **NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. SEQUENTIAL OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT IN-CROP MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. Over-the-top applications made after the 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 the following products and applied over the top of Roundup Ready cotton up to the 4-leaf stage. 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.

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[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use postemergence (in-crop) to cotton: clethodim, fluazifop-P-butyl, fomesafen, metolachlor, s-metolachlor, pyriithiobac-sodium, sethoxydim, quizalofop-P-ethyl.

Assure II, Dual MAGNUM, Fusilade, Poast Plus, Reflex, Select, Stalwart, Staple

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

Dual MAGNUM and Stalwart applied over the top of Roundup Ready cotton may cause leaf injury in the form of necrotic spotting.]

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**Salvage Treatment**—This treatment may be used after the 4-leaf stage of development and should only be used where weeds threaten to cause the loss of the crop. Apply 22 fluid ounces per acre either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds. **NOTE: SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT SHOULD BE USED PER GROWING SEASON.**

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I. MAIN LABEL FOR FOOD CROP USES

PRECAUTIONS, RESTRICTIONS: Maximum quantity of this product that may be applied for all in-crop applications from ground-cracking to layby combined is 2.5 quarts per acre per season. 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 COTTON.

Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

**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 through layby. At this stage, use post-directed equipment that directs the spray to the base of the cotton plants. Avoid contact of the herbicide spray with leaves of the cotton plant to the maximum extent possible. To minimize spray contact, maintain a low spray pressure (less than 30 pounds per square inch) and place nozzles in a low position directing a horizontal spray pattern under the leaves of the cotton plant and onto the weeds in the row. For best results, make applications while weeds are small (less than 3 inches in height). See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

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

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use postemergence (in-crop) to cotton: carfentrazone-ethyl, diuron, flumioxazin, fluometuron, linuron, pendimethalin, prometryn, pyriithiobac-sodium, trifloxysulfuron-sodium.

Aim, Caparol, Chateau, Cotoran, Direx, Envoke, Layby-Pro, Prowl H2O, Staple, Valor

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

PRECAUTIONS, RESTRICTIONS: Maximum quantity of this product that may be applied for all in-crop applications from ground-cracking to layby combined is 2.5 quarts per acre per season. NO MORE THAN TWO APPLICATIONS OF THIS PRODUCT SHOULD BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. 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. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

**Preharvest**

USE INSTRUCTIONS: This product may be applied for annual and perennial weed control prior to crop harvest after 20 percent boll crack. Apply up to 44 fluid ounces of this product per acre. **NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Do not apply this product for preharvest weed control to cotton grown for seed, as a reduction in germination or vigor may occur.

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I. MAIN LABEL FOR FOOD CROP USES

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

12.6 Roundup Ready Flex Cotton

The instructions provided in this section are specific to, and should only be used with, varieties designated as Roundup Ready Flex cotton. Applications described in this section over the top of cotton other than Roundup Ready Flex cotton will cause crop injury and reduced yields. DO NOT combine the instructions in this section with those in the "Roundup Ready Cotton" section of this label, or with any other Roundup Ready cotton or Roundup Ready Flex cotton instructions on labeling for this or other glyphosate-containing products. Drift of this product from applications made to Roundup Ready Flex cotton onto adjacent fields of post 4-leaf (node) Roundup Ready cotton may cause extensive crop injury, including boll loss, delayed maturity and/or yield loss.

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

GENERAL USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready Flex cotton.

Maximum Application Rates	
Combined total per year for all applications	5.3 quarts per acre
Total of all Preplant, At-Planting, Preemergence applications	3.3 quarts per acre
Total of all In-crop applications from cracking to 60 percent open bolls	4.0 quarts per acre
Total of all In-crop applications between layby and 60 percent open bolls	44 fluid ounces per acre
Maximum allowed from 60 percent open bolls to 7 days prior to harvest	44 fluid ounces per acre

GENERAL PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application of this product from cotton emergence through harvest must not exceed 4 quarts per acre. The maximum combined total quantity of this product for all applications in a season is 5.3 quarts per acre. See the "GENERAL 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 2,4-D or Clarity and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. Ensure that the specific product being used in the tank mixture is registered for application prior to emergence of cotton. Read and follow label directions of all products in the tank mixture.



## I. MAIN LABEL FOR FOOD CROP USES

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use prior to the emergence of cotton: diuron, fluometuron, metolachlor, s-metolachlor, pendimethalin, prometryn, pyriithiobac-sodium.

Caparol, Cotoran, Direx, Dual MAGNUM, Prowl H2O, Stalwart, Staple]

**PRECAUTIONS, 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. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

**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. In general, an initial application of 22 fluid ounces per acre on 1 to 3 inch tall annual grass and broadleaf weeds is recommended. 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 thorough weed coverage.

**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.

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use postemergence (in-crop) to cotton: clethodim, fluazifop-P-butyl, metolachlor, s-metolachlor, pyriithiobac-sodium, quizalofop-p-ethyl, sethoxydim, trifloxysulfuron-sodium.

Assure II, Dual MAGNUM, Envoke, Fusilade, Poast Plus, Select, Stalwart, Staple

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

Dual MAGNUM and Stalwart applied over the top of Roundup Ready cotton may cause leaf injury in the form of necrotic spotting.]

**PRECAUTIONS, 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. **In-crop application rates above 22 fluid ounces per acre made alone or with the addition of other crop chemical products containing surfactant may cause a crop response including leaf speckling or leaf necrosis.** Do not exceed a maximum rate of 22 fluid ounces of this product per acre when making applications by air. Between layby and 60 percent open bolls, the maximum combined total application rate of this product is 44 fluid ounces per acre. The maximum combined total of 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-THE-TOP APPLICATIONS TO ROUNDUP READY FLEX COTTON.** Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

I. MAIN LABEL FOR FOOD CROP USES

**Preharvest**

USE INSTRUCTIONS This product may be applied to Roundup Ready Flex cotton for annual and perennial weed control prior to harvest after 60 percent boll crack. Up to 44 fluid ounces of this product may be applied using either aerial or ground application equipment.

NOTE: This product will not enhance the performance of harvest aids when applied to Roundup Ready Flex cotton.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of Roundup Ready Flex cotton. Do not apply this product over the top of cotton grown for seed beyond first bloom, as a reduction in germination or vigor may occur.

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

**12.7 Roundup Ready Soybeans**

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

GENERAL USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready soybeans.

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

GENERAL PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The maximum combined total quantity of this product for all applications in a season is 5.3 quarts per acre. See the "GENERAL 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 soybeans.

Tank Mixtures: This product may be tank-mixed with 2,4-D, Banvel or Clarity and applied prior to planting only This product may be tank-mixed with the following products and applied prior to crop emergence. Ensure that the specific product being used in the tank mixture is registered for application prior to emergence of soybeans. Read and follow label directions of all products in the tank mixture.

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I. MAIN LABEL FOR FOOD CROP USES

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use preplant, at-planting and/or preemergence to soybeans: alachlor, atrazine, carfentrazone-ethyl, chlorimuron ethyl, clethodim, clomazone, cloransulam-methyl, dimethenamid-p, fenoxypyr, fluazifop-p-butyl, flufenacet, flumetsulam, flumiclorac pentyl ester, flumioxazin, fomesafen, imazaquin, imazethapyr, lactofen, linuron, metolachlor, s-metolachlor, metribuzin, pendimethalin, sulfentrazone, tribenuron methyl, quizalofop P-ethyl.

Aim, Assure II, Axiom, Authority, Blanket, Boundary, Canopy, Classic, Cobra, Command, Command Xtra, Domain, Dual MAGNUM, Dual II MAGNUM, FirstRate, Flexstar, Frontier, Fusion, Gangster, INTRRO, Lexone, Linex, Lorox, Me-Too-Lachlor, Micro-Tech, Outlook, Pendimax, Prowl, Prowl H2O, Pursuit, Pursuit Plus, Python, Reflex, Resource, Scepter, Select, Select MAX, Sencor, Spartan, Squadron, Steel, Valor]

**PRECAUTIONS, 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. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

**Postemergence (In-crop)**

**USE INSTRUCTIONS:** This product may be used to control annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) through flowering (R2 stage soybeans). R2 stage soybeans ends when a pod 5 millimeters (3/16 inch) long appears at one end of the four uppermost nodes on the main stem with a fully developed leaf (R3 stage). Refer to the "ANNUAL WEEDS RATE SECTION" of this label for rate recommendations for specific annual weeds. In general, an initial application of 22 fluid ounces per acre on 2 to 8 inch tall weeds is recommended. Weeds will generally be 2 to 8 inches tall, 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.

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 johnsongrass, 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 such as 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 CROP. To control giant ragweed, it is recommended that 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 the following products and applied postemergence (in-crop) over the top of Roundup Ready soybeans. Ensure that the specific product being used in the tank mixture is registered for application postemergence (in-crop) to soybeans. Read and follow label directions of all products in the tank mixture.

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use postemergence (in-crop) to soybeans: acifluorfen, bentazon, chlorimuron ethyl, clethodim, cloransulam-methyl,

## I. MAIN LABEL FOR FOOD CROP USES

fenoxaprop, fluazifop-p-butyl, flumiclorac pentyl ester, fomesafen, imazamox, imazethapyr, lactofen, pendimethalin, quizalofop P-ethyl, sethoxydim, thifensulfuron-methyl.

Arrow, Assure II, Basagran, Classic, Cobra, Extreme, FirstRate, Flexstar, Fusilade DX, Fusion, Harmony GT XP, Poast, Poast Plus, Pursuit, Pursuit Plus, Raptor, Reflex, Select, Select MAX, Synchrony STS, Targa, Ultra Blazer.]

**PRECAUTIONS, 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. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture. In some cases, these tank-mix products will cause visual soybean injury.

**Preharvest**

**USE INSTRUCTIONS:** This product may be applied to Roundup Ready 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.

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

**12.8 Roundup Ready Sugar Beet**

**TYPES OF APPLICATIONS:** Preplant, At-Planting, Preemergence, Postemergence (In-crop)

**GENERAL USE INSTRUCTIONS:** Refer to the following table for maximum application rates of this product with Roundup Ready sugar beet.

<b>Maximum Application Rates</b>	
Combined total per year for all applications	5.3 quarts per acre
Total of all Preplant, At-Planting, Preemergence applications	3.3 quarts per acre
Total of all applications made from emergence to 8-leaf stage	56 fluid ounces per acre
Total of all applications made between 8-leaf stage and canopy closure	44 fluid ounces per acre

**GENERAL PRECAUTIONS, RESTRICTIONS:** See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The maximum combined total quantity of this product for all applications in a season is 5.3 quarts per acre. See the "GENERAL INFORMATION" section of this label for more information on Maximum Application Rates.

I. MAIN LABEL FOR FOOD CROP USES

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**Preplant, At-Planting, Preemergence**

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

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

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[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use preplant, at-planting and/or preemergence to sugar beet: ethofumesate.

Norton SC]

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PRECAUTIONS, 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. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

**Postemergence (In-crop)**

USE INSTRUCTIONS: This product may be applied over the top of Roundup Ready sugar beets for control of annual grasses and broadleaf weeds from emergence to 30 days prior to harvest. To maximize yield potential, spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of Roundup Ready sugar beet. Ensure that the specific product being used in the tank mixture is registered for application postemergence (in-crop) to sugar beet. Read and follow label directions of all products in the tank mixture

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[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use postemergence (in-crop) to sugar beet: clethodim, clopyralid, desmedipham, dimethenamid, ethofumesate, s-metolachlor, phenmedipham, quizalofop-p-ethyl, sethoxydim, trisulfuron-methyl.

Assure II, Betamix, Betanex, Dual MAGNUM, Frontier, Norton SC, Outlook, Poast, Progress, Select, Stinger, Upbeet]

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PRECAUTIONS, RESTRICTIONS: The combined total application of this product from crop emergence through harvest must not exceed 3 quarts 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 last application and sugar beet harvest. Tank mixtures of this product with herbicides, insecticides or fungicides may result in crop injury or reduced weed control. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

**13.0 NON-CROP USES AROUND THE FARMSTEAD**

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## I. MAIN LABEL FOR FOOD CROP USES

**TYPES OF USES:** General Weed Control, Trim-and-Edge, Greenhouse/Shadehouse, Chemical Mowing, Cut Stump, Habitat Management

**GENERAL USE INSTRUCTIONS:** Refer to the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label for rate recommendations for specific weeds. When applied as directed, this product will control these annual and perennial grasses and broadleaf weeds. Recommended rates of this product specified in the following sections, or on separate supplemental labeling or fact sheets published by Monsanto for this product, on how to control tough weeds supersede recommended rates in the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label.

### 13.1 General Weed Control and Trim-and-Edge

**USE INSTRUCTIONS:** This product may be used to control annual weeds, perennial weeds and woody brush found in any part of the farmstead, including around building foundations and equipment storage areas, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, and prior to planting landscape ornamentals.

**TANK MIXTURES:** This product may be tank-mixed with the following products, provided that the specific product used is registered for use on these non-crop sites. Refer to the individual product labels for approved farmstead sites and application rates. Read and follow label directions of all products in the tank mixture.

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[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use on these non-crop sites: 2,4-D, bromacil, chlorosulfuron, dicamba, diuron, imazapic, imazapyr, metsulfuron-methyl, oryzalin, oxadiazon, pendimethalin, prodiamine, simazine, sulfometuron-methyl.

Aresnal, Banvel, Barricade 65WG, Clarity, Diuron, Endurance, Escort XP, Karmex DF, Krovar I DF, Oust, Pendulum 3.3 EC, Pendulum WDG, Plateau, Princep DF, Princep 4L, Ronstar, Sahara DG, Simazine, Surflan AS Specialty, Telar DF, Vanquish]

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For annual weeds, use 22 fluid ounces per acre of this product when weeds are less than 6 inches tall, 32 fluid ounces per acre when weeds are 6 to 12 inches tall and 44 fluid ounces per acre when weeds are greater than 12 inches tall. For perennial weeds, apply 44 fluid ounces to 3.3 quarts per acre in these tank mixes. For application of tank mixtures with these products using backpack sprayers, handguns or other hand-held applicators, see the "ANNUAL WEEDS—HAND-HELD OR BACKPACK EQUIPMENT" section of this label for recommended application rates of this product.

**PRECAUTIONS, RESTRICTIONS:** Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

### 13.2 Greenhouse/Shadehouse

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

**PRECAUTIONS, RESTRICTIONS:** Desirable vegetation must not be present during application and air circulation fans must be turned off until after the application has dried. Do not use in residential greenhouses.

### 13.3 Chemical Mowing

**USE INSTRUCTIONS:** This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4 fluid ounces of this product per acre when treating Kentucky bluegrass. Use 4 fluid ounces of this product per acre when treating tall fescue, fine fescue,

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orchardgrass, bahiagrass or quackgrass covers. Use 11 fluid ounces of this product per acre when treating Bermudagrass. Use 44 fluid ounces of this product per acre when treating torpedograss or paragrass. Apply treatments in 10 to 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads.

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

### 13.4 Cut Stump

**TYPES OF USES:** Treating cut stumps in any non-crop site listed on this label

**USE INSTRUCTIONS:** This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50- to 100-percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

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

**PRECAUTIONS, RESTRICTIONS:** Do not make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. 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.

### 13.5 Habitat Management

**TYPES OF USES:** Habitat Restoration and Maintenance, Wildlife Food Plots

#### Habitat Restoration and Maintenance

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

#### Wildlife Food Plots

**USE INSTRUCTIONS:** This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species, including Roundup Ready canola, 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. For specific product application instructions in Roundup Ready canola wildlife food plots, see the "ROUNDUP READY CANOLA" section of this label.

**PRECAUTIONS, RESTRICTIONS:** Do not process treated Roundup Ready canola seed from wildlife food plots for food or domestic livestock feed. Do not graze or feed treated Roundup Ready canola from wildlife food plots to domestic livestock. There are no rotational restrictions for planting any wildlife food species or for allowing native species to repopulate the area following applications of this product.

## 14.0 ANNUAL WEEDS RATE SECTION

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When water carrier volumes are between 16 and 40 gallons per acre for ground applications, and between 6 and 15 gallons per acre for aerial applications, the following use rates will control the annual weeds listed in the 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 APPLICATIONS, AND BETWEEN 3 AND 5 GALLONS PER ACRE FOR AERIAL APPLICATIONS, USE THE RATES SPECIFIED FOR INDIVIDUAL WEEDS AS FOLLOWS IN THE "ANNUAL WEEDS RATE TABLE" (Alphabetically by Species).**

Apply to actively growing annual weeds. Annual weeds are generally easiest to control when they are small.

Older, mature (hardened) and otherwise tough to control annual weed species may require higher rates than recommended in this table even if they meet the size requirements listed. This product may be used up to 44 fluid ounces per acre for tough-to-control weeds and where heavy weed densities exist. Follow all precautions and restrictions, including the allowed maximum application rates and crop stage timings specified in the instructions for the 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 with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

**ANNUAL WEEDS RATE TABLE**  
(Alphabetically by Species)

WEED SPECIES	RATE				
	(fluid ounces per acre)				
	11	16	22	27	32
	<b>Maximum height/length (in inches)</b>				
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	-	-



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Browntop panicum	6	8	12	-	24
Buckwheat, wild <sup>3</sup>	-	1	2	-	-
Burcucumber	-	6	12	-	18
Buttercup	12	20	-	-	-
Carolina geranium	-	-	4	-	9
Carpetweed	-	6	12	-	-
Cheat <sup>2</sup>	6	20	-	-	-
Chervil	20	-	-	-	-
Chickweed	-	12	18	-	-
Cocklebur	12	18	24	-	36
Copperleaf, hophornbeam	-	2	4	-	6
Copperleaf, Virginia	-	2	4	-	6
Coreopsis, plains	-	6	12	-	18
Corn, volunteer	6	12	20	-	-
Corn speedwell	12	-	-	-	-
Crabgrass	3	6	12	-	-
Crowfootgrass	-	-	6	-	12
Cuttleaf evening primrose	-	-	3	-	6
Devilsclaw (unicorn plant)	-	3	6	-	-
Dwarf dandelion	12	-	-	-	-
Eastern mannagrass	8	12	-	-	-
Eclipta	-	4	8	12	-
Fall panicum	4	-	6	-	12
Falsedandelion	-	20	-	-	-
Falseflax, smallseed	12	-	-	-	-
Fiddleneck	-	6	12	-	-
Field pennycress	6	12	-	-	-
Filaree	-	-	6	-	12
Fleabane, annual	6	20	-	-	-
Fleabane, hairy ( <i>Conyza bonariensis</i> )	-	-	6	-	10
Fleabane, rough	3	6	12	-	-
Florida pusley	-	-	4	-	6
Foxtail, giant, bristly, yellow	6	12	20	-	-
Foxtail, Carolina	10	-	-	-	-
Foxtail, green	12	-	-	-	-
Goatgrass, jointed	6	12	-	-	-
Goosegrass	-	3	6	-	12
Grain sorghum (milo)	6	12	20	-	-
Groundcherry	-	3	6	-	9
Groundsel, common	-	6	10	-	-
Hemp sesbania	-	2	4	6	8
Henbit	-	-	6	-	12
Horseweed/ Mare's tail *	-	6	12	-	18

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(Conyza canadensis)					
Itchgrass	6	8	12	-	18
Jimsonweed	-	-	12	-	18
Johnsongrass, seedling	6	12	18	-	24
Junglerice	-	3	6	7	9
Knotweed	-	-	6	-	12
Kochia <sup>4</sup>	-	3 to 6	12	-	-
Lambsquarters *	-	6	12	-	20
Little barley	6	12	-	-	-
London rocket	6	-	24	-	-
Mayweed	-	2	6	12	18
Morningglory, annual ( <i>Ipomoea spp</i> )	-	-	3	-	6
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	-
Pigweed species *	-	12	18	24	-
Prickly lettuce	-	6	12	-	-
Purslane	-	-	3	-	6
Ragweed, common	-	6	12	-	18
Ragweed, giant	-	6	12	-	18
Red rice	-	-	4	-	-
Rye, volunteer/cereal <sup>2</sup>	6	18	18 +	-	-
Ryegrass species *	-	-	6	-	12
Sandbur, field	6	12	-	-	-
Sandbur, longspine	6	12	-	-	-
Shattercane	6	12	20	-	-
Shepherd's-purse	6	12	-	-	-
Sicklepod	-	2	4	-	8
Signalgrass, broadleaf	-	3	6	7	9
Smartweed, ladysthumb	-	-	6	-	9
Smartweed, Pennsylvania	-	-	6	-	9
Sowthistle, annual	-	-	6	-	12
Spanishneedles	-	-	6	-	12
Speedwell, purslane	12	-	-	-	-
Sprangletop	6	12	20	-	-
Spurge, prostrate	-	6	12	-	-
Spurge, spotted	-	6	12	-	-
Spurry, umbrella	6	-	-	-	-

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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	-	18
Witchgrass	-	12	-	-	-
Woolly cupgrass	-	6	12	-	-
Yellow rocket	-	12	20	-	-

<sup>1</sup> For control of downy brome in no-till systems, use 16 fluid ounces per acre.

<sup>2</sup> Performance is better if application is made before this weed reaches the boot stage of growth.

<sup>3</sup> Use 16 fluid ounces per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 22 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 22 fluid ounces followed by 22 fluid ounces of this product per acre.

<sup>4</sup> Do not treat kochia in the button stage.

<sup>5</sup> Control of Russian thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank mixture with 2,4-D as described below may improve control.

\* A glyphosate resistant biotype has been confirmed. For additional information, refer to the "WEED RESISTANCE MANAGEMENT" section of this label. You may also visit on the Internet, [www.weedscience.org](http://www.weedscience.org) or [www.weedresistancemanagement.com](http://www.weedresistancemanagement.com), or contact your Monsanto representative.

**14.1 Annual Weeds—Tank Mixtures with 2,4-D, Dicamba or Tordon 22K**

Better control of certain tough weeds can be achieved by tank-mixing this product with 0.25 pound of dicamba, or 0.5 pound of 2,4-D, or 1 to 2 fluid ounces of Tordon 22K per acre. 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, marestalk/horseweed, morning glory, kochia (dicamba only) wild buckwheat (Tordon 22K only); 12 inches—cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

This product at rates given in the "ANNUAL WEEDS RATE SECTION" plus will control the following weeds up to a maximum height or length of 6 inches: For better control of common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf up to a maximum height of 6 inches, tank-mix this product with 0.5 pound of 2,4-D, per acre.

Ensure that the specific product is registered for application at the desired site. Follow all precautions and limitations on the tank-mix product label, including application timing restrictions, soil restrictions, minimum re-cropping interval and rotational guidelines. Use according to the more

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restrictive label requirements. Some crop injury may occur if dicamba or Tordon 22K is applied within 45 days of planting.

**14.2 Annual Weeds—Hand-Held or Backpack Equipment**

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. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 0.7-percent solution.

For best results, use a 1.5-percent solution on harder-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

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 and trees.

**14.3 Annual Weeds—Tank Mixtures with Atrazine 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.

Applications of 16 to 20 fluid ounces of this product, plus 1 to 2 pounds of atrazine, per acre will control the following weeds: barnyardgrass (requires 20 fluid ounces for control), downy brome, green foxtail, lambsquarters, prickly lettuce, tansy mustard, pigweed, field sandbur, stinkgrass, Russian thistle, volunteer wheat, witchgrass and kochia (add 0.12 pound of dicamba for control). Ensure that the specific atrazine or dicamba product being used is registered for application on the desired site.

**15.0 PERENNIAL WEEDS RATE SECTION**

Apply to actively growing perennial weeds.

**NOTE:** If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the recommended stages.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.

Unless otherwise stated, allow 7 or more days after application before tillage.

Best results are obtained when soil moisture is adequate for active weed growth.

**PERENNIAL WEEDS RATE TABLE  
(Alphabetically by Species)**

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
<b>Alfalfa</b>	<b>1 - 1.5</b>	<b>3 - 10</b>	<b>1.5%</b>
Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.			
<b>Alligatorweed</b>	<b>3</b>	<b>3 - 20</b>	<b>1%</b>
For partial control, apply when most of the plants are in bloom. Repeat applications will be required to achieve control.			
<b>Anise (fennel)<sup>1</sup></b>	<b>--</b>	<b>--</b>	<b>1 - 1.5%</b>
Apply as a spray-to-wet treatment			

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<b>Bahiagrass<sup>2</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
<b>Bentgrass</b>	<b>1</b>	<b>10 - 20</b>	<b>1.5%</b>
For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.			
<b>Bermudagrass</b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
For control, apply 3.3 quarts of this product per acre. For partial control, apply 64 fluid ounces per acre. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to achieve control.			
<b>Bermudagrass, water (knotgrass)</b>	<b>0.7 - 1</b>	<b>5 - 10</b>	<b>1.5%</b>
Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Apply when water bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.			
Fall applications only: Apply 22 fluid ounces of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water bermudagrass that is 12 to 18 inches in length.			
This product is not registered in California for use on water bermudagrass.			
<b>Bindweed, field</b>	<b>0.4 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
Do not treat field bindweed under drought stress, as good soil moisture is necessary for active growth.			
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. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.			
Also for control, apply 44 fluid ounces of this product, plus 0.5 pound of dicamba, in 10 to 20 gallons of water per acre. Do not apply by air.			
For suppression on irrigated agricultural land, apply 22 to 44 fluid ounces of this product, plus 1 pound of 2,4-D, in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in fall fallow ground when the 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 for ground applications, and 3 to 5 gallons of water per acre for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.			
<b>In California only</b> , 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. Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.			
<b>Bluegrass, Kentucky</b>	<b>0.7 - 1.5</b>	<b>3 - 40</b>	<b>1.5%</b>
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			

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renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

<b>Blueweed, Texas</b>	<b>2 - 3.3</b>	<b>3 - 40</b>	<b>1.5%</b>
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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. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

<b>Brackenfern</b>	<b>2 - 3</b>	<b>3 - 40</b>	<b>1%</b>
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Apply to fully expanded fronds that are at least 18 inches long.

<b>Bromegrass, smooth</b>	<b>0.7 - 1.5</b>	<b>3 - 40</b>	<b>1.5%</b>
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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. Apply to actively growing plants when most have reached 4 to 12 inches in height.

<b>Bursage, woolly-leaf</b>	<b>--</b>	<b>3 - 20</b>	<b>1.5%</b>
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For control, apply 44 fluid ounces of this product plus 0.5 pound of dicamba per acre. For partial control, apply 22 fluid ounces of this product plus 0.5 pound of dicamba per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.

<b>Canarygrass, reed<sup>2</sup></b>	<b>1.5 - 2</b>	<b>3 - 40</b>	<b>1.5%</b>
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<b>Cattail<sup>2</sup></b>	<b>2 - 3.3</b>	<b>3 - 40</b>	<b>1.5%</b>
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<b>Clover; red or white<sup>1</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
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Also for control, apply 11 to 22 fluid ounces of this product, plus 0.5 to 1 pound of 2,4-D, in 3 to 10 gallons of water per acre.

<b>Cogongrass</b>	<b>2 - 3.3</b>	<b>10 - 40</b>	<b>1.5%</b>
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Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to achieve control.

<b>Dallisgrass<sup>2</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
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<b>Dandelion<sup>1</sup></b>	<b>2 - 3.3</b>	<b>3 - 40</b>	<b>1.5%</b>
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Also for control, apply 11 fluid ounces of this product, plus 0.5 pound of 2,4-D, in 3 to 10 gallons of water per acre.

<b>Dock, curly<sup>1</sup></b>	<b>2 - 3.3</b>	<b>3 - 40</b>	<b>1.5%</b>
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Also for control, apply 11 to 22 fluid ounces of this product, plus 0.5 to 1 pound of 2,4-D, in 3 to 10 gallons of water per acre.

<b>Dogbane, hemp</b>	<b>3</b>	<b>3 - 40</b>	<b>1.5%</b>
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Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall.

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 for ground applications, and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum emergence of dogbane has occurred.

<b>Fescue (except tall)<sup>2</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
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<b>Fescue, tall</b>	<b>0.7 - 2</b>	<b>3 - 40</b>	<b>1.5%</b>
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Apply 64 fluid ounces of this product per acre when most plants have reached boot-to-early

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seedhead stage of development.

Fall applications only: Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 11 fluid ounces per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.

<b>Guineagrass</b>	<b>1.5 - 2</b>	<b>3 - 40</b>	<b>1%</b>
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Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment. In Texas and ridge of Florida, use 44 fluid ounces of this product per acre for control. In the flatwoods region of Florida, 64 fluid ounces per acre is required for control.

<b>Horsenettle<sup>1</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
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<b>Horseradish</b>	<b>3</b>	<b>3 - 40</b>	<b>1.5%</b>
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Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

<b>Iceplant<sup>1</sup></b>	<b>--</b>	<b>--</b>	<b>1.5 - 2%</b>
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Thorough coverage is necessary for best control.

<b>Jerusalem artichoke<sup>1</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
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<b>Johnsongrass</b>	<b>0.4 - 2</b>	<b>3 - 40</b>	<b>1%</b>
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In annual cropping systems, apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In non-crop areas, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank-mix with residual herbicides when using 22 fluid ounces of this product per acre.

For burndown of johnsongrass, apply 11 fluid ounces of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.

Spot treatment (partial control or suppression)—Apply a 0.7-percent solution of this product when johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

<b>Kikuyugrass</b>	<b>1.5 - 2</b>	<b>3 - 40</b>	<b>1.5%</b>
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Spray when most kikuyugrass is at least 8 inches in height (3- or 4-leaf stage of growth). Allow 3 or more days after application before tillage.

<b>Knapweed</b>	<b>3</b>	<b>3 - 40</b>	<b>1.5%</b>
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Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

<b>Lantana</b>	<b>--</b>	<b>--</b>	<b>1%</b>
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Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.

<b>Lespedeza<sup>1</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
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<b>Milkweed, common</b>	<b>2</b>	<b>3 - 40</b>	<b>1.5%</b>
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Apply when most plants have reached the late bud to flower stage of growth.

<b>Muhly, wirestem</b>	<b>0.7 - 1.5</b>	<b>3 - 40</b>	<b>1.5%</b>
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Use 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre or in pasture, sod, or non-crop areas.

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Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications, or in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage.

<b>Mullein, common<sup>1</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
<b>Napiergrass<sup>2</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
<b>Nightshade, silverleaf</b>	<b>1.5</b>	<b>3 - 10</b>	<b>1.5%</b>

Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.

<b>Nutsedge, purple or yellow</b>	<b>0.4 - 2</b>	<b>3 - 40</b>	<b>1 - 1.5%</b>
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Apply 64 fluid ounces of this product per acre or apply a 1- to 1.5-percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.

Sequential applications: 22 to 44 fluid ounces of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control.

For partial control of existing plants, apply 11 to 44 fluid ounces of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.

<b>Orchardgrass</b>	<b>0.7 - 1.5</b>	<b>3 - 40</b>	<b>1.5%</b>
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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. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Orchardgrass sods going to no-till corn: Apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications, and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

<b>Pampasgrass</b>	<b>--</b>	<b>--</b>	<b>1 - 1.5%</b>
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Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

<b>Paragrass<sup>2</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
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<b>Phragmites</b>	<b>2 - 3.3</b>	<b>10 - 40</b>	<b>1 - 1.5%</b>
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For partial control, and best results, treat during late summer or fall when plants are actively growing and in full bloom. Treatment before or after this stage may result in reduced control. Due to the dense nature of this vegetation that may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to achieve control. Visual control symptoms will be slow to develop.

<b>Poison hemlock</b>	<b>--</b>	<b>--</b>	<b>1 - 1.5%</b>
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For hand-held equipment, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth. Thorough coverage is necessary for best control.

<b>Pokeweed, common</b>	<b>1</b>	<b>3 - 40</b>	<b>1.5%</b>
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Apply to actively growing plants up to 24 inches tall.



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<b>Quackgrass</b>	<b>0.7 - 2</b>	<b>3 - 40</b>	<b>1.5%</b>
<p>In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 44 fluid ounces of this product. Do not tank-mix with residual herbicides when using the 22-fluid-ounce rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results.</p> <p>In pastures, sods or non-crop areas where deep tillage does not follow application: Apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.</p>			
<b>Redvine</b>	<b>0.5 - 1.5</b>	<b>5 - 10</b>	<b>1.5%</b>
<p>For suppression, apply 16 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 44 fluid ounces per acre. Apply recommended rates in 5 to 10 gallons of water per acre. Apply 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. Make applications at least 1 week before a killing frost.</p>			
<b>Reed, giant</b>	--	--	<b>1.5%</b>
<p>Best results are obtained when applications are made in late summer to fall.</p>			
<b>Ryegrass, perennial</b>	<b>0.7 - 2</b>	<b>3 - 40</b>	<b>1%</b>
<p>In annual cropping systems, apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In non-crop areas, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.</p> <p>For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using 22 fluid ounces of this product per acre.</p>			
<b>Smartweed, swamp<sup>1</sup></b>	<b>2 - 3.3</b>	<b>3 - 40</b>	<b>1.5%</b>
<p>Also for control, apply 11 fluid ounces of this product, plus 0.5 pound of 2,4-D, in 3 to 10 gallons of water per acre in the late summer or fall.</p>			
<b>Sowthistle, perennial</b>	<b>1.5 - 2</b>	<b>3 - 40</b>	<b>1.5%</b>
<p>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 3 or more days after application before tillage.</p>			
<b>Spurge, leafy</b>	--	<b>3 - 10</b>	<b>1.5%</b>
<p>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 in the late summer or fall. If mowing has occurred prior to treatment, apply when most plants are 12 inches tall.</p>			
<b>Starthistle, yellow</b>	<b>1.5</b>	<b>10 - 40</b>	<b>1.5%</b>
<p>Best results are obtained when applications are made during the rosette, bolting and early flower stages.</p>			
<b>Sweet potato, wild</b>	--	--	<b>1.5%</b>
<p>For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.</p>			
<b>Thistle, artichoke</b>	--	--	<b>1.5%</b>
<p>For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat</p>			

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applications may be required.

<b>Thistle, Canada</b>	<b>1.5 - 2</b>	<b>3 - 40</b>	<b>1.5%</b>
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 3 or more days after application before tillage.			
For suppression in the spring, apply 22 fluid ounces of this product, or 11 fluid ounces of this product plus 0.5 pound of 2,4-D, in 3 to 10 gallons of water per acre. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.			
<b>Timothy<sup>2</sup></b>	<b>1.5 - 2</b>	<b>3 - 40</b>	<b>1.5%</b>
<b>Torpedograss</b>	<b>2.5 - 3.3</b>	<b>3 - 40</b>	<b>1.5%</b>
For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to achieve control. Fall treatments must be applied before frost.			
<b>Trumpetcreeper</b>	<b>1.5</b>	<b>5 - 10</b>	<b>1.5%</b>
For partial control, apply in late September or October, to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.			
<b>Vaseygrass<sup>2</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
<b>Velvetgrass<sup>2</sup></b>	<b>2 - 3.3</b>	<b>3 - 20</b>	<b>1.5%</b>
<b>Wheatgrass, western<sup>2</sup></b>	<b>1.5 - 2</b>	<b>3 - 40</b>	<b>1.5%</b>

<sup>1</sup> Apply when most plants have reached the early bud stage of growth.

<sup>2</sup> Apply when most plants have reached the early heading stage of growth.

**16.0 WOODY BRUSH AND TREES RATE SECTION**

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Unless otherwise directed, apply broadcast treatments in 3 to 40 gallons of water per acre. Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

**WOODY BRUSH AND TREES RATE TABLE  
(Alphabetically by Species)**

<b>Weed Species</b>	<b>Rate (QT/A)</b>	<b>Hand-Held % Solution</b>
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Alder	2 - 3	1%
Ash <sup>1</sup>	1.5 - 3.3	1 - 1.5%
Aspen, quaking	1.5 - 2	1%
Bearmat (Bearclover) <sup>1</sup>	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%
<p>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.</p>		
Blackgum	1.5 - 3.3	1 - 1.5%
Bracken	1.5 - 3.3	1 - 1.5%
Broom; French, Scotch	--	1 - 1.5%
Buckwheat, California <sup>1,2</sup>	--	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%
Coyote brush	--	1 - 1.5%
<p>Apply when at least 50 percent of the new leaves are fully developed.</p>		
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%
<p>For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed eucalyptus plants.</p>		
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%

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Repeat applications may be required to achieve control.

Locust, black <sup>1</sup>	1.5 - 3	1 - 1.5%
Madrone resprouts <sup>1</sup>	--	1.5%
Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.		
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 new leaves are fully developed. For partial control, apply 44 to 86 fluid ounces of this product per acre.		
Maple, sugar	--	1%
Apply when at least 50 percent of the new leaves are fully developed.		
Monkey flower <sup>1,2</sup>	--	1 - 1.5%
Oak; black, white <sup>1</sup>	1.5 - 3	1 - 1.5%
Oak, post	2 - 3	1%
Oak, northern	--	1%
Apply when at least 50 percent of the new pin leaves are fully developed		
Oak; southern red	1.5 - 2	1%
Persimmon <sup>1</sup>	1.5 - 3.3	1 - 1.5%
Pine	1.5 - 3.3	1 - 1.5%
Poison ivy/Poison oak	2.5 - 3.3	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 - 1.5%
Redbud, eastern	1.5 - 3.3	1 - 1.5%
Rose, multiflora	1.5	1%
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%
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%

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Tan oak resprouts <sup>1</sup>	--	1.5%
Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.		
Thimbleberry	1.5 - 2	1%
Tobacco, tree <sup>1</sup>	--	1 - 1.5%
Trumpetcreeper	1.5 - 2	1%
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 - 1.5%
Willow	2 - 3	1%

<sup>1</sup> Partial Control

<sup>2</sup> Thorough coverage of foliage is necessary for best results.

**17.0 LIMIT OF WARRANTY AND LIABILITY**

Monsanto Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

To the extent consistent with applicable law, buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company to the extent consistent with applicable law, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, failure of this product to control weed biotypes which develop resistance to glyphosate, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For in-crop (over-the-top) uses on Roundup Ready crops, crop safety and weed control performance are not warranted by Monsanto when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF

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SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

Amplify, Bullet, CROPSHIELD, Degree, Degree Xtra, Harness, INTRRO, Lariat, Micro-Tech, Monsanto and Vine symbol, Roundup Original, Roundup Ready, Roundup UltraMAX, Transorb, and YUKON are trademarks of Monsanto Technology LLC.

All other trademarks are the property of their respective owners.

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This product is protected by U.S. Patent No's. 5,668,085 and 6,365,551. Other patents pending. No license granted under any non-U.S. patent(s).

EPA Reg. No 524-544

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In case of an emergency involving this product,  
Call Collect, day or night, (314) 694-4000.

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© [DATE] MONSANTO COMPANY  
ST. LOUIS, MISSOURI, 63167 USA

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## II. MAIN LABEL FOR INDUSTRIAL, TURF AND ORNAMENTAL USES

[INSERT BRAND NAME]

The complete broad-spectrum postemergence professional herbicide for industrial, turf and ornamental weed control.

### Complete Directions for Use

EPA Reg. No. 524-544

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION IS LIKELY TO RESULT.

Read the entire label before using this product.

Use only according to label instructions.

Container Label Statement (5 gallons or smaller):

This container is not to be sold to homeowners for residential use.

Not all products recommended on this label are registered for use in California. Check the registration status of each product in California before using.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

Refillable Container Label Statement

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. IT IS INTENDED THAT REPACKAGING BE ONLY IN ACCORDANCE WITH A MONSANTO REPACKAGING OR TOLL REPACKAGING AGREEMENT.

Non-Refillable Container Label Statement:

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING

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  - 8.4 Habitat Management
  - 8.5 Hollow Stem Injection
  - 8.6 Injection and Frill (Woody Brush and Trees)
  - 8.7 Ornamentals, Plant Nurseries and Christmas Trees
  - 8.8 Parks and Recreational Areas
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  - 8.11 Rangelands
  - 8.12 Utility Sites
  - 8.13 Conservation Reserve Program (CRP)
  - 8.14 Grass Seed or Sod Production
  - 8.15 Pastures
  
- 9 9.0 **WEEDS CONTROLLED**
  - 9.1 Annual Weeds
  - 9.2 Perennial Weeds
  - 9.3 Woody Brush and Trees

10 10.0 **LIMIT OF WARRANTY AND LIABILITY**

**1.0 INGREDIENTS**

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt.....	48.8%
OTHER INGREDIENTS:.....	51.2%
	100.0%

Optional alternate statement: OTHER INGREDIENTS (including 10 percent surfactant):



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\*Contains 660 grams per liter or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per liter or 4.5 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent No's. 5,668,085 and 6,365,551. Other patents pending. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE,

1-800-332-3111

IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314)-694-4000

3.0 PRECAUTIONARY STATEMENTS

Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.

HARMFUL IF INHALED.

Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist.

<b>FIRST AID:</b> Call a poison control center or doctor for treatment advice.	
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses if present after the first 5 minutes then continue rinsing eye.</li> </ul>
<b>IF ON SKIN</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> </ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> </ul>
<ul style="list-style-type: none"> <li>• Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</li> <li>• You may also contact <b>(314) 694-4000</b>, collect day or night, for emergency medical treatment information.</li> <li>• This product is identified as <b>[INSERT BRAND NAME], EPA Registration No. 524-544.</b></li> </ul>	

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)

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

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**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 and chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

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

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

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**User Safety Recommendations:**

Users should:

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

**3.2 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.

**3.3 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. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto supplemental labeling. Supplemental labeling can be found on the Internet at [www.cdms.net](http://www.cdms.net) or [www.greenbook.net](http://www.greenbook.net), or obtained from your Authorized Monsanto Retailer or Monsanto Company Representative.

**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

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that are in effect in the month in which the pesticide will be applied. New Bulletins will generally be available from the above sources 6 months prior to their effective dates.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

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

**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.

**4.0 STORAGE AND DISPOSAL**

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**PESTICIDE STORAGE:** 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 should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

**CONTAINER DISPOSAL:** Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

[See container label for additional CONTAINER DISPOSAL instructions.]

[CONTAINER LABEL DISPOSAL STATEMENTS]

[FOR PLASTIC ONE-WAY CONTAINERS & BOTTLES]

Do not reuse container. Triple rinse the container, then puncture and place into a pesticide container recycling program, if available, or dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke

[FOR ONE-WAY PLASTIC DRUMS]

Do not reuse container. Return container per the Monsanto container return program. If not returned, triple rinse the container, then puncture and place into a pesticide container recycling program, if

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available, or dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

[FOR METAL CONTAINERS (non-aerosol)]

Triple rinse the container (or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[FOR REFILLABLE PORTABLE (MINI-BULK) CONTAINERS]

This container must only be refilled with pesticide product. **Do not reuse this container for any other purpose.**

Final disposal must be in compliance with State and local regulations. If not refilled, returned or recycled, triple rinse or pressure rinse, puncture and dispose of in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Do not transport this container if it is damaged or leaking. If this container is damaged, leaking or obsolete, or to obtain information about recycling portable refillable containers, contact Monsanto Company at 1-800-ROUNDUP (1-800-768-6387).

**Users:** When this container is empty, replace the cap and seal all openings that have been made during usage, and return the container to the point of purchase, or to an alternate location designated by the manufacturer at the time of purchase of this product. If not returned, triple rinse or pressure rinse the empty container and offer it for recycling, if available.

**Refillers:** Do not reuse this min-bulk container except for refill in accordance with a valid Monsanto Agreement for Repackaging and Toll Repackaging. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting.

[FOR REFILLABLE STATIONARY BULK CONTAINERS]

This container must only be refilled with pesticide product. **Do not reuse this container for any other purpose.**

Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices.

Final disposal must be in compliance with State and local regulations. If not refilled, triple rinse or pressure rinse this container and offer for recycling or reconditioning, if possible. If burned, stay out of smoke.

## 5.0 GENERAL INFORMATION

### (How this product works)

**Product Description:** This product is a postemergence, systemic herbicide with no soil residual activity. It gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid containing surfactant and no additional surfactant is needed or recommended.

Optional alternate statement: It is formulated as a water-soluble liquid containing **10 percent** surfactant and no additional surfactant is needed or recommended.

**Time to Symptoms:** This product moves through the plant from the point of foliage contact to and into the root system. Visible effects are a gradual wilting and yellowing of the plant, which advances to complete browning of aboveground growth and deterioration of underground plant parts. Effects are visible on most annual weeds within 2 to 4 days, but on most perennial weeds, effects may not

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be visible for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms.

**Stage of Weeds:** Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity.

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

**Cultural Considerations:** Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed or cut, and have not been allowed to regrow to the recommended stage for treatment.

**Rainfastness:** Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

**No Soil Activity:** Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or rootstocks of perennials will not be affected by this herbicide and will continue to grow.

**Annual Maximum Application Rates:** The combined total of all treatments must not exceed 7 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rates. See the "INGREDIENTS" section of this label for necessary information.

**ATTENTION**

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

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

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of 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. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

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

**5.1 Weed Resistance Management**

GROUP	9	HERBICIDE
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Glyphosate, the active ingredient in this product, is a Group 9 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group or using other cultural or mechanical practices.

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To minimize the occurrence of glyphosate-resistant biotypes observe the following general weed management recommendations:

- Scout your application site before and after herbicides applications.
- Control weeds early when they are relatively small.
- Incorporate other herbicides and cultural or mechanical practices as part of your weed control system where appropriate.
- Utilize the recommended label rate for the most difficult weed in the site. Avoid tank-mixtures with other herbicides that reduce this product's efficacy (through antagonism) or tank mixture recommendations which encourage rates of this product below the label recommendations.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from site to site to minimize spread of weed seed.
- Use new commercial seed as free of weed seed as possible.
- Report any incidence of repeated non-performance of this product on a particular weed to your Monsanto representative, local retailer, or county extension agent.

**5.2 Management Recommendations for Glyphosate Resistant Weed Biotypes**

**NOTE:** Appropriate testing is critical in order to confirm weed resistance to glyphosate. Contact your Monsanto representative to determine if resistance has been confirmed to any particular weed biotype in your area. Control recommendations for biotypes confirmed as resistant to glyphosate are made available on separately published supplemental labeling or fact sheets for this product and may be obtained from your local retailer or Monsanto representative.

Since the occurrence of new glyphosate resistant weeds cannot be determined until after product use and scientific confirmation, Monsanto Company is not responsible for any losses that may result from the failure of this product to control glyphosate-resistant weed biotypes.

The following good weed management practices are recommended to reduce the spread of confirmed glyphosate resistant biotypes:

- If a naturally occurring resistant biotype is present at your site, this product may be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices may also be used as appropriate.
- Scout treated sites after herbicide applications and control escapes of resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving sites known to contain resistant biotypes.

**6.0 MIXING**

Spray solutions of this product should be mixed, stored and applied using only clean stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers. Clean sprayer parts immediately after using this product by thoroughly flushing with water.

Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by State or local regulations.

**6.1 Mixing with Water**

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

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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 recommended amount of this product near the end of the filling process and mix gently. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foaming, mix gently, terminate by-pass and return lines at the bottom of the tank and, if necessary, use an anti-foam or defoaming agent.

**6.2 Tank Mixing**

This product does not provide residual weed control. This product may be tank-mixed with other herbicides to provide residual weed control, a broader weed control spectrum or an alternate mode of action. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

When this label recommends a tank mixture with a generic active ingredient such as diuron, atrazine, 2,4-D, or dicamba, the user is responsible for ensuring that the specific application being made is included on the label of the specific product being used in the tank mixture. Refer to all individual product labels, supplemental labeling and fact sheets for all products in the tank mixture, and observe all precautions and limitations on the label, including application timing restrictions, soil restrictions, and use according to the most restrictive precautionary statements for each product in the tank mixture.

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

Buyer and all users are responsible for 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 recommended in this label. Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance.

**6.3 Tank-Mixing Procedure**

When tank mixing, read and carefully observe label directions, cautionary statements and all information on the labels of all products used. Add the tank-mix product to the tank as directed by the label. Maintain agitation and add the recommended amount of this product.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation may be required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50-mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance. Ensure that the specific tank mixture product is registered for application at the desired site.

Refer to the "Tank Mixing" and "GENERAL INFORMATION" sections for additional precautions.

**6.4 Mixing for Hand-Held Sprayers**

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

Spray Solution

Desired Volume	Amount of [INSERT BRAND NAME]					
	0.4%	0.7%	1%	1.5%	4%	7%
1 gal	0.5 oz	1 oz	1.3 oz	2 oz	5 oz	9 oz

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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 use in backpack, knapsack or pump-up sprayers, it is recommended that the appropriate amount of this product be mixed with water in a larger container and then filling sprayer with the mixed solution.

**6.5 Colorants or Dyes**

Colorants or marking dyes may be added to spray solutions of this product; however, they may reduce product performance at lower rates or dilution. Use colorants or dyes according to the manufacturer's recommendations.

**7.0 APPLICATION EQUIPMENT AND TECHNIQUES**

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

APPLY SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

**7.1 Aerial Equipment**

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

FOR AERIAL APPLICATION IN CALIFORNIA REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

AVOID DRIFT. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Avoid direct application to any body of water.

Use the recommended rates of this herbicide in 3 to 25 gallons of water per acre unless otherwise specified on this label, or in separate supplemental labeling or fact sheets published by Monsanto for this product.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

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 MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE. Maintaining an organic coating (paint) that meets aerospace specification MIL-C-38413 may prevent corrosion.

**SPRAY DRIFT MANAGEMENT**



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

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

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

### AERIAL SPRAY DRIFT MANAGEMENT

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

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 should 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 Inversion" 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.).

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### **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 should 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**

Applications should not occur during a temperature inversion because drift potential is high. 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**

This product should 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).

### **7.2 Ground Broadcast Equipment**

Use the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified on this label, or in separate supplemental labeling or fact sheets published by Monsanto for this product. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat-fan nozzles. Check spray pattern for even distribution of spray droplets.

### **7.3 Hand-Held or Backpack Equipment**

Apply to foliage of vegetation to be controlled on a spray-to-wet basis, do not spray to the point of runoff. Spray coverage should be uniform and complete. Use coarse sprays only.

For low-volume directed spray applications, spray coverage should be uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half of the plant is important for best results. To ensure adequate spray coverage, spray both sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple sprouts.

### **7.4 Selective Equipment**

This product may be diluted in water and applied through shielded applicators, hooded sprayers, wiper applicators or sponge bars to weeds listed on this label growing in any non-crop site specified on this label.

**AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION, AS SERIOUS INJURY OR DEATH OF THE DESIRABLE VEGETATION IS LIKELY TO OCCUR.**

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Application equipment used above desired vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation is likely to result in discoloration, stunting or destruction.

Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

**Shielded and Hooded Applicators**

A shielded or hooded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide. Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation. **EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

**Wiper Applicators**

Wiper applicators are devices that physically wipe the appropriate amounts of this product directly onto the weed. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation.

Application equipment used over the top of desirable vegetation should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds should be a minimum of 6 inches above the desirable vegetation. Adjust the height of the applicator to ensure adequate contact with weeds. Weeds not contacted by the herbicide solution will not be affected. Poor contact may occur when weeds are growing in dense clumps, in severe weed infestations or when weed height varies dramatically. In these instances, repeat treatments may be necessary.

Operate this equipment at ground speeds no greater than 5 miles per hour. Performance may be improved by reducing speed in areas of heavy weed infestations to provide adequate wiper saturation with the herbicide solution. Better results may be obtained when two applications are made in opposite directions.

Droplets, mist, foam, or splatter of the herbicide solution settling onto desirable vegetation may result in discoloration, stunting, or destruction. Avoid leakage or dripping onto desirable vegetation. Keep wiping surfaces clean. Be aware that on sloping ground the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of the wiper applicator.

Do not use wiper applicators when weeds are wet.

Mix only the amount of this product to be used during a 1-day period, as reduced product performance may result from the use of solutions held in storage. Clean wiper parts immediately after using this product by thoroughly flushing with water.

**For Rope or Sponge Wick Applicators**—Solutions ranging from 25 to 70 percent of this product in water may be used.

**For Panel Applicators and Pressure-Feed Systems**—Solutions ranging from 25 to 100 percent of this product in water may be used.

When applied as recommended, this product CONTROLS the following weeds:

- |                 |                  |
|-----------------|------------------|
| Corn, volunteer | Sicklepod        |
| Panicum, Texas  | Spanishneedles   |
| Rye, common     | Starbur, bristly |
| Shattercane     |                  |

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When applied as recommended, this product SUPPRESSES the following weeds:

Beggarweed, Florida	Ragweed, common
Bermudagrass	Ragweed, giant
Dogbane, hemp	Smutgrass
Dogfennel	Sunflower
Guineagrass	Thistle, Canada
Johnsongrass	Thistle, musk
Milkweed	Vaseygrass
Nightshade, silverleaf	Velvetleaf
Pigweed, redroot	

**7.5 Injection Systems**

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the undiluted concentrate of other products when using injection systems unless specifically recommended.

**7.6 CDA Equipment**

The rate of this product applied per acre by controlled droplet application (CDA) equipment must not be less than the amount recommended in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 2 to 15 gallons of water per acre.

CDA equipment produces a spray pattern that is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction is likely to result.

**8.0 SITE AND USE RECOMMENDATIONS**

Use in areas such as airports, apartment complexes, Christmas tree farms, commercial sites, Conservation Reserve Program (CRP) areas, ditch banks, driveways, dry ditches, dry canals, fencerows, golf courses, greenhouses, industrial sites, landscape areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parks, parking areas, pastures, petroleum tank farms and pumping installations, plant nurseries, public areas, railroads, rangeland, recreation areas, rights-of-way, roadsides, shadehouses, sod or turf seed farms, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas and wildlife management areas.

Unless otherwise specified on this label, or in separate supplemental labeling or fact sheets published by Monsanto for this product. Applications may be made to control any weeds listed in the "WEEDS CONTROLLED" section of this label. Refer also to the "Selective Equipment" section.

**8.1 Cut Stump**

Cut stump treatments may be made on any site listed on this label. This product will control many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50- to 100-percent solution of this product to the freshly cut surface **immediately after** cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

Alder	Reed, giant
Eucalyptus	Saltcedar

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Madrone	Sweetgum
Oak	Tan oak
Pepper, Brazilian	Willow
Pine, Austrian	

DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. 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.

### 8.2 Forestry Site Preparation

This product is recommended for the control or partial control of woody brush, trees, and herbaceous weeds in forestry. This product is also recommended for use in preparing or establishing wildlife openings within these sites and maintaining logging roads.

This product is recommended for use in site preparation prior to planting any tree species, including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites.

Use higher rates of this product within the recommended range for control or partial control of woody brush, trees and hard-to-control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Increase rates within the recommended range for control of perennial herbaceous weeds any time after emergence and before seedheads, flowers or berries appear.

Use the lower rates of this product within the recommended range for control of annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to the foliage of actively growing annual herbaceous weeds any time after emergence.

**TANK MIXTURES:** Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of all products used. Use according to the most restrictive precautionary statements for each product in the mixture.

**NOTE:** For forestry site preparation, make sure the tank-mix product is approved for use prior to planting the desired species. Observe planting interval restrictions.

Any recommended rate of this product may be used in a tank mix with the following products for forestry site preparation.

- Arsenal Applicators Concentrate
- Chopper
- Escort
- Escort XP
- Garlon 3A
- Garlon 4
- Landmark XP
- Oust
- Oust XP
- Westar

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Do not apply this product as an over-the-top broadcast spray for forestry conifer or hardwood release unless otherwise specified on this label, or in separate supplemental labeling or fact sheets published by Monsanto for this product.

### 8.3 General Non-crop Areas and Industrial Sites

#### General Weed Control, Trim-and-Edge, Bare Ground

This product may be used in general non-crop areas. It may be applied with any application equipment described in this label. This product may be used to trim-and-edge around objects in non-crop sites, for spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

**TANK MIXTURES:** This product may be tank mixed with the following products, provided that the specific product is registered for use on such non-crop sites. Refer to the individual product labels for approved non-crop sites and application rates.

Arsenal™	atrazine <sup>1</sup>	
Barricade™ 65WG	Crossbow L	dicamba <sup>1</sup>
diuron <sup>1</sup>	Endurance™	Escort™
Gallery 75DF	Garlon™ 3A	Garlon 4
Goal 2XL	Karmex™ DF	Krovar™ I DF
Landmark II MP	Landmark MP	Landmark XP
Milestone	Oust	Oust XP
Outrider	Pendulum™ 3.3 EC	Pendulum WDG
pendimethalin <sup>1</sup>	Plateau™	Poast
Princep™ DF	Princep™ 4L	Ronstar™ 50WP
Sahara™	simazine <sup>1</sup>	Surflan™ AS
Surflan WDG	Telar™	Transline
Vanquish™	Velpar DF	Velpar L
2,4-D <sup>1</sup>	Certainty	Escort XP

<sup>1</sup> Tank mixtures with products containing this single active ingredient may be made provided the specific product is registered for this use.

This product plus dicamba tank mixtures may not be applied by air in California.

When applied as a tank mixture for bare ground, this product provides control of the emerged annual weeds and control or partial control of emerged perennial weeds, woody brush and trees.

For control or partial control of the following perennial weeds, apply 22 to 44 fluid ounces of this product plus 2 to 4 ounces of Oust or Oust XP per acre.

Bahiagrass	Johnsongrass
Bermudagrass	Poorjoe
Broomsedge	Quackgrass
Dallisgrass	Vaseygrass
Dock, curly	Vervain, blue
Dogfennel	
Fescue, tall	

#### Chemical Mowing - Perennials

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This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 5 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, quackgrass or reed canarygrass covers. Use 4 fluid ounces of this product per acre when treating Kentucky bluegrass. Apply treatments in 10 to 40 gallons of spray solution per acre.

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

### **Chemical Mowing - Annuals**

For growth suppression of some annual grasses, such as annual ryegrass, wild barley and wild oats growing in coarse turf on roadsides or other industrial areas, apply 3 to 4 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Applications should be made when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments may cause injury to the desired grasses.

### **Dormant Turfgrass**

This product may be used to control or suppress many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahiagrass turf. Treat only when turf is dormant and prior to spring green-up.

Apply 5 to 44 fluid ounces of this product per acre. Apply the recommended rates in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated.

Treatments in excess of 11 fluid ounces per acre may result in injury or delayed green-up in highly maintained areas, such as golf courses and lawns. DO NOT apply tank mixtures of this product plus Oust in highly maintained turfgrass areas.

### **Actively Growing Bermudagrass**

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. DO NOT apply more than 11 fluid ounces of this product per acre in highly maintained turfgrass areas. DO NOT apply tank mixtures of this product plus Oust or Oust XP in highly maintained turfgrass areas. Use only in areas where some temporary injury or discoloration can be tolerated.

### **Turfgrass Renovation, Seed or Sod Production**

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 to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses such as bermudagrass, summer or fall applications provide the best control. 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 spray.

Desirable turfgrasses may be planted following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

**PRECAUTIONS, RESTRICTIONS:** Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow translocation into underground plant parts. If application rates total 2 quarts 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 livestock before application and wait 8 weeks after application before grazing or harvesting.

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## 8.4 Habitat Management

### Habitat Restoration and Management

This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas, including rangeland and wildlife refuges. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad-spectrum vegetation control requirements. Spot treatments can be made to selectively remove unwanted plants for habitat management and enhancement.

### Wildlife Food Plots

This product may be used as a site preparation treatment 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 to allow translocation into underground plant parts.

## 8.5 Hollow Stem Injection

This product may be applied through hand-held injection devices that deliver recommended amounts of this product into targeted hollow-stem plants growing in any non-crop site specified on this label.

For control of the following hollow-stem plants, follow the use instructions below:

### Japanese Knotweed, *Polygonum cuspidatum*

Inject 5 mL per stem of this product between the second and third internode.

### Bohemian Knotweed, *Polygonum bohemicum*

Inject 5 mL per stem of this product between the second and third internode.

### Giant Hogweed, *Hercleum mantegazzianum*

Inject one leaf cane per plant 12 inches above the root crown with 5 mL of a 5% v/v solution of this product.

### Poison Hemlock, *Conium maculatum*

Inject one leaf cane per plant 10 to 12 inches above the root crown with 5 mL of a 5% v/v solution of this product.

### Field horsetail, *Equisetum arvense*

Inject one segment above the root crown with 0.5 mL per stem of this product. Use a small syringe that calibrates to this rate.

### Canada Thistle, *Cirsium arvense*

Cut 8 to 9 of the tallest plants at bud stage in a clump with clippers. Use a cavity needle that is pushed into the stem center and then slowly remove as 0.5 mL per stem of this product is injected into the stem.

**Note:** The combined total for all treatments must not exceed 7 quarts of this product per acre. At 5 mL per stem, 7 quarts should treat approximately 1300 stems per acre.

## 8.6 Injection and Frill (Woody Brush and Trees)

This product may be used to control woody brush and trees by injection or frill applications. Apply this product using suitable equipment that must penetrate into the living tissue. Apply the equivalent of 1 mL of this product per each 2 to 3 inches of trunk diameter at breast height (DBH). This is best achieved by applying a 50- to 100-percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow run-off to occur from frilled or cut areas in species that exude sap freely. In species such as this, make the frill or cuts at an oblique angle to produce a cupping effect and use a 100-percent concentration of this product. For best



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results, application should be made during periods of active growth and after full leaf expansion. This product will control many species, some of which are listed below:

<u>Control</u>	<u>Partial Control</u>
Oak	Black gum
Poplar	Dogwood
Sweetgum	Hickory
Sycamore	Maple, red

### 8.7 Non-Food Tree, Shrub, or Vine Production Sites

This product may be used for general weed control prior to the planting of and around established ornamentals, or any woody tree, shrub or vine species, including arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce and yew, growing in plant nurseries, on Christmas tree farms, or on other non-food tree production sites.

UNLESS OTHERWISE DIRECTED, THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES. Care must be taken to avoid contact of spray, drift or mist with foliage or green bark of desirable ornamental species.

This product may also be used to control weeds growing in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off until after the application has dried.

TYPES OF APPLICATION: Site Preparation, Post-directed, Trim-and-edge, Wiper Application

#### Site Preparation

This product may be used prior to planting any tree, shrub or vine, including Christmas tree species, in a nursery or production setting.

#### Post-Directed, Trim-and-Edge

This product may be used as a post-directed spray around established woody ornamental species, or to trim and edge around trees, buildings, sidewalks, roads, potted plants and other objects in a production setting.

Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.

#### Wiper Application

This product may be used through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established trees, shrubs or vines. See the "Selective Equipment" section of this label for further information about the proper use of wiper applicators.

### 8.8 Parks and Recreational Areas

The types of applications listed in the "**General Non-crop Areas and Industrial Sites**" section may be made in park and recreational areas.

This product may be used in parks, and recreational areas. It may be applied with any application equipment described in this label. This product may be used to trim-and-edge around trees, fences, paths, around buildings, sidewalks and other objects in these areas. This product may be used for spot treatment of unwanted vegetation. This product may be used to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

### 8.9 Railroads

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The types of applications listed in the "General Non-crop Areas and Industrial Sites" section may be made in railroads.

**Bare Ground, Ballast and Shoulders, Crossings, Spot Treatment**

This product may be used to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used, as weeds emerge, to maintain bare ground. This product may be used to control tall-growing weeds to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way. For crossing applications, up to 80 gallons of spray solution per acre may be used.

TANK MIXTURES: This product may be tank mixed with the following products for ballast, shoulder, spot, bare ground and crossing treatments provided the specific product used is registered for use on these sites. Refer to the individual product labels for approved sites and application rates:

Arsenal	atrazine <sup>1</sup>
dicamba <sup>1</sup>	diuron <sup>1</sup>
Escort	Escort XP
Garlon 3A	Garlon 4
Hyvar™ X	Hyvar X-L
Krovar I DF	Oust
Oust XP	Outrider
Sahara DG	simazine <sup>1</sup>
Spike™ 80DF	Telar DF
Transline	Vanquish
Velpar DF	Velpar L
2,4-D	

<sup>1</sup> Tank mixtures with products containing this single generic active ingredient may be made provided the specific product is registered for this use.

**Brush Control**

This product may be used to control woody brush and trees on railroad rights-of-way. Apply 2.5 to 7.0 quarts of this product per acre as a broadcast spray, using boom-type or boomless nozzles. Up to 80 gallons of spray solution per acre may be used. Apply a 0.7- to 1.5-percent solution of this product when using high-volume spray-to-wet applications. Apply a 4.0- to 7.0-percent solution of this product when using low volume directed sprays for spot treatment.

TANK MIXTURES: This product may be mixed with the following products for enhanced control of woody brush and trees, provided the specific product used is registered for use on these sites. Refer to the individual product labels for approved sites and application rates:

Arsenal	atrazine <sup>1</sup>
dicamba <sup>1</sup>	diuron <sup>1</sup>
Escort	Escor XP
Garlon 3A	Garlon 4
Hyvar X	Hyvar X-L
Krovar I DF	Oust
Oust XP	Outrider
Sahara DG	simazine <sup>1</sup>
Spike 80 DF	Telar DF
Transline	Vanquish
Velpar DF	Velpar L

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2,4-D <sup>1</sup>

<sup>1</sup> Tank mixtures with products containing this single generic active ingredient may be made provided the specific product is registered for this use.

**Bermudagrass Release**

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 11 to 32 fluid ounces of this product in up to 80 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

This product may be tank-mixed with Oust or Oust XP. If tank-mixed, use no more than 11 to 32 fluid ounces of this product with 1 to 2 ounces of Oust or Oust XP per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust or Oust XLabel. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Blackberry	Johnsongrass
Bluestem, silver	Poorjoe
Broomsedge	Raspberry
Dallisgrass	Trumpetcreeper
Dewberry	Vaseygrass
Dock, curly	Vervain, blue
Dogfennel	

Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications in the same season are not recommended, since severe injury may occur.

**8.10 Roadsides**

The types of applications listed in the "General Non-crop Areas and Industrial Sites" section may be made in roadsides.

**Shoulder Treatments**

This product may be used on road shoulders. It may be applied with boom sprayers, shielded boom sprayers, high-volume off-center nozzles, hand-held equipment, and similar equipment.

**Guardrails and Other Obstacles to Mowing**

This product may be used to control weeds growing under guardrails and around signposts and other immovable objects along the roadside.

**Spot Treatment**

This product may be used as a spot treatment to control unwanted vegetation growing along roadsides.

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**TANK MIXTURES:** This product may be tank-mixed with the following products, for shoulder, guardrail, spot and bare ground treatments provided that the specific product used is registered for use on these sites. Refer to the individual product labels for approved sites and application rates:

atrazine <sup>1</sup>	Oust
Clarity	Outrider
Crossbow L	Pendulum 3.3 EC
dicamba <sup>1</sup>	Pendulum WDG
diuron <sup>1</sup>	Plateau
Endurance	Princep DF
Escort	Princep 4L
Escort XP	Ronstar 50WP
Gallery 75 DF	Sahara
Krovar I DF	Simazine
Landmark II MP	Surflan
Landmark MP	Telar
Landmark XP	Vanquish
	2,4-D
Poast	Velpar DF
	Velpar L

<sup>1</sup> Tank mixtures with products containing this single generic active ingredient may be made provided the specific product is registered for this use.

**Release of Bermudagrass or Bahiagrass**

**Dormant Applications**

This product may be used to control or partially control many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. Treat only when turf is dormant and prior to spring green-up. This product may also be tank-mixed with Outrider, Oust or Oust XP for residual control. Tank mixtures of this product with Oust or Oust XP may delay green-up.

For best results on winter annuals, treat when plants are in an early growth stage (below 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is at or beyond the 4- to 6-leaf stage.

Apply 5 to 44 fluid ounces of this product in a tank mix with 0.75 to 1.33 ounces of Outrider herbicide per acre. Read and follow all label directions for Outrider herbicide.

Apply 5 to 44 fluid ounces of this product per acre alone or in a tank mixture with 0.25 to 1 ounce per acre of Oust or Oust XP. Apply the recommended rates in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. To avoid delays in green-up and minimize injury, add no more than 1.0 ounce of Oust or Oust XP per acre on bermudagrass and no more than 0.5 ounce of Oust or Oust XP per acre on bahiagrass and avoid treatments when these grasses are in a semi-dormant condition.

**Actively Growing Bermudagrass**

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 11 to 32 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

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Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

This product may be tank-mixed with Outrider herbicide for control or partial control of Johnsongrass and other weeds listed on the Outrider label. Use 5 to 22 fluid ounces of this product with 0.75 to 1.33 ounces of Outrider per acre. Use the higher rates of both products for control of perennial weeds or annual weeds greater than 6 inches in height.

This product may be tank-mixed with Oust or Oust XP. If tank-mixed, use no more than 11 to 22 fluid ounces of this product with 1 to 2 ounces of Oust or Oust XP per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust Oust XP label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Bluestem, silver	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Trumpetcreeper
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season are not recommended, since severe injury may occur.

**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. Apply 1 to 2 weeks after full green-up 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 3.0 fluid ounces of this product per acre, followed by an application of 1.5 to 3.0 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

This product may be used for control or partial control of Johnsongrass and other weeds listed on the Outrider herbicide label. Apply 4 fluid ounces of this product with 0.75 to 2.0 ounces of Outrider per acre. Use the higher rates for control of perennial weeds and annual weeds greater than 6 inches in height. Use only on well established bahiagrass.

A tank mixture of this product plus Oust or Oust XP may be used. Apply 4.0 fluid ounces of this product plus 0.25 ounce of Oust or Oust XP per acre 1 to 2 weeks following an initial spring mowing. Make only one application per year.

**8.11 Rangelands**

This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands, pastures, and industrial sites. Preventing weed seed production is critical to the successful control of annual grassy weeds invading these perennial grass sites. Follow-up applications in sequential years should eliminate most of the viable seeds. Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

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**Bromus:** This product may be used to control or suppress downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*), cheatgrass (*Bromus secalinus*), cereal rye and jointed goatgrass found in rangelands pastures and industrial sites. Apply 5 to 11 fluid ounces of this product per acre on a broadcast basis.

For best results, treatment should coincide with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Applications should be made to the same site each year until seed banks are depleted and the desirable perennial grasses can become reestablished on the site.

**Medusahead:** To control or suppress medusahead, apply 11 fluid ounces of this product per acre at the 3-leaf stage when plants are actively growing. Delaying applications beyond this stage will result in reduced or unacceptable control. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses. Applications may be made in the fall or spring.

Applications may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For applications using ground equipment, apply in 10 to 20 gallons of water per acre.

**Spot Treatment, Wiper Application**

This product may be applied in rangeland, pastures or industrial sties as a spot treatment, or over the top of desirable grasses using wiper applicators to control tall weeds. Applications may be repeated in the same area at 30-day intervals.

For spot treatments or wiper application methods using rates of 2 quarts of this product per acre or less, the entire site or any portion of it may be treated. When spot treatments or wiper applications are made using rates above 2 quarts of this product per acres, no more than 10 percent of the total site may be treated at ay one time. To achieve maximum performance, remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting for feed.

**8.12 Utility Sites**

In utilities, this product is recommended for use along electrical power, pipeline and telephone rights-of-way, and in other sites associated with these rights-of-way, such as substations, roadsides, railroads or similar rights-of-way that run in conjunction with utilities.

This product may be used in utility sties and substations for bare ground, trim-and-edge around objects, spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting a utility site to ornamentals, flowers, turfgrass (sod or seed), or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

This product is also recommended for use in preparing or establishing wildlife openings within these sites, maintaining access roads and for side trimming along utility rights-of-way.

**TANK MIXTURES:** This product may be tank mixed with the following products, provided that the specific product used is registered for use on these sties. Refer to the individual product labels for approved sites and application rates.

For control of herbaceous weeds, use the lower recommended tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher recommended rates.

- |                     |                       |
|---------------------|-----------------------|
| Arsenal             | atrazine <sup>1</sup> |
| Barricade 65WG      | dicamba <sup>1</sup>  |
| diuron <sup>1</sup> | Endurance             |

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Escort	Escort XP
Garlon 3A <sup>2</sup>	Garlon 4 <sup>3</sup>
Krenite	Krovar I DF
Oust	Oust XP
Outrider	pendimethalin <sup>1</sup>
Plateau	
Ronstar 50WP	Sahara
simazine <sup>1</sup>	Surflan AS
Surflan WDG	Telar DF
Transline	Vanquish
Velpar DF	Velpar L
2,4-D	

<sup>1</sup> Tank mixtures with product containing this generic active ingredient may be made provided the specific product is registered for this use.

<sup>2</sup> Ensure that Garlon 3A is thoroughly mixed with water according to label directions before adding this product. Have spray mixture agitating at the time this product is added to avoid spray incompatibility problems.

<sup>3</sup> For side trimming treatments, it is recommended that this product be used alone or in a tank mixture with Garlon 4.

**8.13 Conservation Reserve Program (CRP)**

This product may be used for renovation (rotating out of CRP), site preparation, postemergence weed control in dormant CRP grasses, or wiper application on CRP land.

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

This product may be used to prepare CRP land for crop production. Refer to Federal, State or local use guides for CRP renovation recommendations.

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

Apply this product to suppress competitive growth and seed production of undesirable vegetation on CRP land. Applications may be made using wiper applicators to control tall weeds, or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray 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 applications can be made after desirable perennial grasses have reached dormancy.

Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant. No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 2 quarts per acre per year onto CRP land.

**8.14 Grass Seed or Sod Production**

This product may be used in grass seed and sod production for preplant, at-planting, preemergence, removal of established stands, renovation, site preparation, shielded spraying, wiper application, spot treatment, and creating rows in annual ryegrass.

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

This product controls most existing vegetation for purposes of renovating turf or forage grass seed areas or for establishing turfgrass grown for sod. It may also be used to destroy remaining undesired grass vegetation when production fields are converted to alternate species or crops. Make

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applications before, during, or after planting, or for renovation purposes. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. 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. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as bermudagrass, summer or fall applications provide best control. Broadcast equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. Application rates up to 3.3 quarts per acre may be used to totally remove established stands of tough to kill grass species.

Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts. If application rates total 2 quarts 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. Applications must be made prior to crop emergence in order to avoid crop injury.

### **Shielded Sprayers**

Apply 22 to 64 fluid ounces of this product in 10 to 20 gallons of water per acre to control weeds between grass seed rows. Uniform planting in straight rows aids in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by the protective shields.

Contact of this product in any manner with desirable vegetation may result in discoloration, stunting or destruction. Such damage shall be the sole responsibility of the applicator.

### **Wiper Application**

This product may be applied over the top of desirable grasses using wiper applicators for the control of tall weeds.

Contact of this product in any manner with desirable vegetation may result in discoloration, stunting or destruction. Such damage shall be the sole responsibility of the applicator.

### **Spot Treatment**

Apply a 1.0 percent solution of this product using hand-held spray equipment to control weeds within established vegetation prior to heading of grasses grown for seed. Hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

The crop sprayed in the treated area will be killed. 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**

Apply 11 to 22 fluid ounces of this product per acre. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height. Use the higher rate within the recommended range when ryegrass is greater than 6 inches in height.

Set nozzle heights to allow the establishment of the desired row spacing. Use of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended.

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

Grower assumes all responsibility for crop losses resulting from misapplication of this product.

### **8.15 Pastures**



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This product may be applied to any pasture grass (*Gramineae* family), including bahiagrass, bermudagrass, bluegrass, brome, fescue, guineagrass, kikuyugrass, orchardgrass, pangola grass, ryegrass, timothy, and wheatgrass. Application can be made as a spot treatment, wiper application, preplant, preemergence, pasture renovation, or postemergence broadcast.

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

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 replanting.

If application rates total 2 quarts 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.

### **Spot Treatment, Wiper Application**

This product may be applied in pastures as a spot treatment, or over the top of desirable grasses using wiper applicators to control tall weeds. Applications may be repeated in the same area at 30-day intervals.

For spot treatments or wiper application methods using rates of 2 quarts of this product per acre or less, the entire field or any portion of it may be treated. When spot treatments or wiper application are made using rates above 2 quarts of this product per acre, no more than 10 percent of the total pasture may be treated at any one time. To achieve maximum performance, remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting for feed.

### **Postemergent Weed Control (Broadcast Treatments)**

This product may be applied to pastures to suppress competitive growth and seed production of annual weeds and undesirable vegetation in pastures. For selective applications with broadcast spray 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 applications can be made after desirable perennial grasses have reached dormancy.

Some stunting of perennial grasses will occur if broadcast applications are made when plants are not dormant. Use of higher application rates will cause stand reductions. No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 2 quarts of this product per acre per year onto pasture grasses except for renovation uses as described previously in this section.

## **9.0 WEEDS CONTROLLED**

Always use the higher rate of this product per acre within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (noncultivated) area.

Reduced results may occur when treating weeds heavily covered with dust. For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

Refer to the following label sections for recommended rates for the control of annual and perennial weeds and woody brush and trees. For difficult to control annual or perennial weeds and woody brush and trees, where plants are growing under stressed conditions, or where infestations are dense, this product may be used at 4 to 7 quarts per acre for enhanced results.

### **9.1 Annual Weeds**

Use 22 fluid ounces of this product per acre if weeds are less than 6 inches in height or runner length and 1 to 2.7 quarts of this product per acre if weeds are over 6 inches in height or runner length or when weeds are growing under stressed conditions. Use the higher rate for tough-to-control species regardless of the weed size at application. Treat tough-to-control weeds early when they are relatively small. This product may be tank mixed provided the tank-mix product is registered

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for use on the target site. Refer to the individual product labels for approved sites and application rates.

For spray-to-wet applications, apply a 0.4-percent solution of this product to weeds less than 6 inches in height or runner length. For annual weeds over 6 inches tall, or for smaller weeds growing under stressed conditions, use a 0.7- to 1.5-percent solution. Use the higher rate for tough-to-control species or for weeds over 24 inches tall. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds.

For low volume directed spray applications, use a 4- to 7-percent solution of this product. Spray coverage should be uniform with at least 50 percent of the foliage contacted. Coverage of the top one half of the plant is important for best results. To ensure adequate spray coverage, spray both sides of large or tall weeds when foliage is thick and dense or where there are multiple spouts.

### Weed Species

---

Anoda, spurred  
 Barley\*  
 Barnyardgrass\*  
 Bassia, fivehook  
 Bittercress\*  
 Black nightshade\*  
 Bluegrass, annual\*  
 Bluegrass, bulbous\*  
 Brome, downy\*  
 Brome, Japanese\*  
 Browntop panicum\*  
 Buttercup\*  
 Carolina foxtail\*  
 Carolina geranium  
 Castor bean  
 Cheatgrass\*  
 Cheeseweed (*Malva parviflora*)  
 Chervil\*  
 Chickweed\*  
 Cocklebur\*  
 Copperleaf, hophornbeam  
 Corn\*  
 Corn speedwell\*  
 Crabgrass\*  
 Dwarf dandelion\*  
 Eastern mannagrass\*  
 Eclipta\*  
 Fall panicum\*  
 Falsedandelion\*  
 Falseflax, smallseed\*  
 Fiddleneck  
 Field pennycress\*  
 Filaree  
 Fleabane, annual\*  
 Fleabane, hairy (*Conyza bonariensis*)\*  
 Fleabane, rough\*  
 Florida pusley  
 Foxtail\*  
 Goatgrass, jointed\*  
 Goosegrass

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Grain sorghum (milo)\*  
Groundsel, common\*  
Hemp sesbania  
Henbit  
Horseweed/Marestail (*Conyza canadensis*)  
Itchgrass\*  
Johnsongrass, seedling  
Junglerice  
Knotweed  
Kochia  
Lamb's-quarters\*  
Little barley\*  
London rocket\*  
Mayweed  
Medusahead\*  
Morningglory (*Ipomoea spp*)  
Mustard, blue\*  
Mustard, tansy\*  
Mustard, tumble\*  
Mustard, wild\*  
Oats  
Pigweed\*  
Plains/Tickseed coreopsis\*  
Prickly lettuce\*  
Puncturevine  
Purslane, common  
Ragweed, common\*  
Ragweed, giant  
Red rice  
Russian thistle  
Rye\*  
Ryegrass\*  
Sandbur, field\*  
Shattercane\*  
Shepherd's-purse\*  
Sicklepod  
Signalgrass, broadleaf\*  
Smartweed, ladysthumb\*  
Smartweed, Pennsylvania\*  
Sowthistle, annual  
Spanishneedles  
Speedwell, purslane\*  
Sprangletop\*  
Spurge, annual  
Spurge, prostrate\*  
Spurge, spotted\*  
Spurry, umbrella\*  
Starthistle, yellow  
Stinkgrass\*  
Sunflower\*  
Teaweed/Prickly sida  
Texas panicum\*  
Velvetleaf  
Virginia copperleaf

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- Virginia pepperweed\*
- Wheat\*
- Wild oats\*
- Witchgrass\*
- Woolly cupgrass\*
- Yellow rocket

\* When using field broadcast equipment (aerial applications or boom sprayers using flat-fan nozzles) these species will be controlled or partially controlled using 11 fluid ounces of this product per acre. Applications must be made using 3 to 10 gallons of carrier volume per acre. Use nozzles that ensure thorough coverage of foliage and treat when weeds are in an early growth stage.

**9.2 Perennial Weeds**

Best results are obtained when perennial weeds are treated after they reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). For non-flowering plants, best results are obtained when the plants reach a mature stage of growth. In many situations, treatments are required prior to these growth stages. Under these conditions, use the higher application rate within the recommended range.

Ensure thorough coverage when using spray-to-wet treatments with hand-held equipment. For best results, use a 1.5-percent solution on harder-to-control perennials such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

For low volume directed spray applications, use a 4- to 7-percent solution of this product. Spray coverage should be uniform with at least 50 percent of the foliage contacted. Coverage of the top one half of the plant is important for best results. To ensure adequate spray coverage, spray both sides of large or tall weeds when foliage is thick and dense or where there are multiple sprouts.

Allow 7 or more days after application before tillage.

<b>Weed Species</b>	<b>Rate (QT/A)</b>	<b>Hand-Held % Solution</b>
Alfalfa*	0.7	1.5
Alligatorweed*	2.7	1.0
Anise (fennel)	1.5 - 2.7	1.0 - 1.5
Bahiagrass	2.0 - 3.3	1.5
Beachgrass, European ( <i>Ammophila arenaria</i> )	—	3.5
Bentgrass*	1.0	1.5
Bermudagrass	3.3	1.5
Bermudagrass, water (knotgrass)	1.0	1.5
Bindweed, field	2.7 - 3.3	1.5
Bluegrass, Kentucky	1.5	1.5
Blueweed, Texas	2.7 - 3.3	1.5
Brackenfern	2.0 - 2.7	1.0
Bromegrass, smooth	1.5	1.5
Bursage, woolly-leaf	—	1.5
Canarygrass, reed	1.5 - 2.0	1.5
Cattail	2.0 - 3.3	1.5
Clover; red, white	2.0 - 3.3	1.5
Cogongrass	2.0 - 3.3	1.5
Dallisgrass	2.0 - 3.3	1.5

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Dandelion	2.0 - 3.3	1.5
Dock, curly	2.0 - 3.3	1.5
Dogbane, hemp	2.7	1.5
Fescue (except tall)	2.0 - 3.3	1.5
Fescue, tall	1.0 - 2.0	1.5
German ivy	1.5 - 2.7	1.0 - 1.5
Guineagrass	2.0	1.0
Horsenettle	2.0 - 3.3	1.5
Horseradish	2.7	1.5
Iceplant	1.0	1.5 - 2.0
Jerusalem artichoke	2.0 - 3.3	1.5
Johnsongrass	1.5 - 2.0	1.0
Kikuyugrass	1.5 - 2.0	1.5
Knapweed	2.7	1.5
Lantana	--	1.0
Lespedeza	2.0 - 3.3	1.5
Milkweed, common	2.0	1.5
Muhly, wirestem	1.5	1.5
Mullein, common	2.0 - 3.3	1.5
Napiergrass	2.0 - 3.3	1.5
Nightshade, silverleaf	1.5	1.5
Nutsedge; purple, yellow	2.0	1.0 - 1.5
Orchardgrass	1.5	1.5
Pampasgrass	2.0 - 3.3	1.0 - 1.5
Paragrass	2.0 - 3.3	1.5
Pepperweed, perennial	2.7	1.5
Phragmites*	2.0 - 3.3	1.0 - 1.5
Poison hemlock	1.5 - 2.7	1.0 - 1.5
Quackgrass	1.5 - 2.0	1.5
Redvine*	1.5	1.5
Reed, giant	2.7 - 3.3	1.5
Ryegrass, perennial	1.5 - 2.0	1.0
Smartweed, swamp	2.0 - 3.3	1.5
Spurge, leafy*	--	1.5
Sweet potato, wild*	--	1.5
Thistle, artichoke	1.5 - 2.0	1.0 - 1.5
Thistle, Canada	1.5 - 2.0	1.5
Timothy	1.5 - 2.0	1.5
Torpedograss*	2.7 - 3.3	1.5
Trumpetcreeper*	1.5 - 2.0	1.5
Vaseygrass	2.0 - 3.3	1.5
Velvetgrass	2.0 - 3.3	1.5
Wheatgrass, western	1.5 - 2.0	1.5

\*Partial control

**9.3 Woody Brush and Trees**

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Apply this product after full leaf expansion, unless otherwise directed on this label, or in separate supplemental labeling or fact sheets published by Monsanto for this product.

Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

For best results when using hand-held equipment, use a 1.5-percent solution on harder-to-control woody brush and trees.

For low volume directed-spray applications, apply a 4- to 7-percent solution of this product. Spray coverage should be uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half of the plant is important for best results. To ensure adequate spray coverage, spray both sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple spouts.

Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Weed Species	Broadcast Rate (QT/A)	Hand-Held Spray-to-Wet % Solution
Alder	2.0 - 2.7	1.0
Ash*	1.5 - 3.3	1 - 1.5
Aspen, quaking	1.5 - 2.0	1.0
Bearclover (Bearmat)*	1.5 - 3.3	1 - 1.5
Beech*	1.5 - 3.3	1 - 1.5
Birch	1.5	1.0
Blackberry	2.0 - 2.7	1.0
Blackgum	1.5 - 3.3	1.0 - 1.5
Bracken	1.5 - 3.3	1.0 - 1.5
Broom; French, Scotch	1.5 - 3.3	1.0 - 1.5
Buckwheat, California*	1.5 - 2.7	1.0 - 1.5
Cascara*	1.5 - 3.3	1.0 - 1.5
Catsclaw*	--	1.0
Ceanothus*	1.5 - 3.3	1.0 - 1.5
Chamise*	1.5 - 3.3	1.0
Cherry; bitter, black, pin	1.5 - 2.0	1.0
Coyote brush	2.0 - 2.7	1.0 - 1.5
Deerweed	1.5 - 3.3	1.0
Dogwood*	1.5 - 3.3	1.0 - 1.5
Elderberry	1.5	1.0
Elm*	1.5 - 3.3	1.0 - 1.5
Eucalyptus	--	1.5
Goose*	1.5 - 3.3	1.0 - 1.5

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Hasardia*	1.5 - 2.7	1.0 - 1.5
Hawthorn	1.5 - 2.0	1.0
Hazel	1.5	1.0
Hickory*	1.5 - 3.3	1.0 - 1.5
Honeysuckle	2.0 - 2.7	1.0
Hornbeam, American*	1.5 - 3.3	1.0 - 1.5
Kudzu	2.5	1.5
Locust, black*	1.5 - 2.7	1.0 - 1.5
Madrone resprouts*	--	1.5
Manzanita*	1.5 - 3.3	1.0 - 1.5
Maple, red	1.5 - 2.7	1.0
Maple, sugar	--	1.0
Monkey flower*	1.5 - 2.7	1.0 - 1.5
Oak; black, white*	1.5 - 2.7	1.0 - 1.5
Oak, post	2.0 - 2.7	1.0
Oak; northern, pin	1.5 - 2.7	1.0
Oak, Scrub*	1.5 - 2.7	1.0
Oak; southern red	1.5 - 2.0	1.0
Peppertree, Brazilian (Florida holly)*	1.5 - 3.3	1.0 - 1.5
Persimmon*	1.5 - 3.3	1.0 - 1.5
Pine	1.5 - 3.3	1.0 - 1.5
Poison ivy	2.5 - 3.3	1.5
Poison oak	2.5 - 3.3	1.5
Poplar, yellow*	1.5 - 3.3	1.0 - 1.5
Redbud, eastern	1.5 - 3.3	1.0 - 1.5
Rose, multiflora	1.5	1.0
Russian olive*	1.5 - 3.3	1.0 - 1.5
Sage, black	1.5 - 2.7	1.0
Sage, white*	1.5 - 2.7	1.0 - 1.5
Sage brush, California	1.5 - 2.7	1.0
Salmonberry	1.5	1.0
Saltcedar*	1.5 - 3.3	1.0 - 1.5
Sassafras*	1.5 - 3.3	1.0 - 1.5
Sourwood*	1.5 - 3.3	1.0 - 1.5
Sumac; laurel, poison, smooth, sugarbush, winged*	1.5 - 2.7	1.0 - 1.5
Sweetgum	1.5 - 2.0	1.0
Swordfern*	1.5 - 3.3	1.0 - 1.5
Tallowtree, Chinese	--	1.0
Tan oak resprouts*	--	1.5
Thimbleberry	1.5	1.0
Tobacco, tree*	1.5 - 2.7	1.0 - 1.5
Toyon*	--	1.5
Trumpetcreeper	1.5 - 2	1.0
Vine maple*	1.5 - 3.3	1.0 - 1.5
Virginia creeper	1.5 - 3.3	1.0 - 1.5

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Waxmyrtle, southern*	1.5 - 3.3	1.0 - 1.5
Willow	2.0	1.0
Yerba Santa*	--	1.5

\*Partial control

**10.0 LIMIT OF WARRANTY AND LIABILITY**

Monsanto Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

To the extent consistent with applicable law, buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company to the extent consistent with applicable law, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, failure of this product to control weed biotypes which develop resistance to glyphosate, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

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All other trademarks are the property of their respective owners.

This product is protected by U.S. Patent No's. 5,668,085 and 6,365,441. Other patents pending. No license granted under any non-U.S. patent(s).

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ST. LOUIS, MISSOURI, 63167 USA

III. SUPPLEMENTAL LABELING

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\* Supplemental label has been approved for this registration but revised in this submission. Revised version is approved on EPA Registration Number 524-537.

\*\* Supplemental label approved for EPA Registration Number 524-537

## SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR **[INSERT BRAND NAME]** BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using **[INSERT BRAND NAME]** as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

**[INSERT BRAND NAME]**

Herbicide

EPA Reg. No. 524-544

Keep out of reach of children.

**CAUTION!**

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

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**[INSERT BRAND NAME]** is a registered trademark of Monsanto Technology LLC.

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### DIRECTIONS FOR USE

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It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for **[INSERT BRAND NAME]** for essential product performance information.

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**[INSERT SPECIFIC DIRECTION FOR USE FROM FOLLOWING SECTIONS HERE]**

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Read the "Limit of Warranty and Liability" in the label booklet for **[INSERT BRAND NAME]** before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

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ST. LOUIS, MISSOURI 63167 USA

**A. FOR USE IN DORMANT ALFALFA**

**DIRECTIONS FOR USE**

This product will control or suppress many weeds, including quackgrass, downy brome and cheatgrass in dormant alfalfa.

Apply 6 to 8 fluid ounces per acre of this product. Apply in the spring to alfalfa that is dormant. Applications should be made after spring temperatures have warmed enough to encourage resumption of weed growth, but prior to initiation of trifoliolate leaf expansion of the alfalfa. Applications made after expansion of the first trifoliolate leaf of the alfalfa will cause growth reduction and reduced crop yield.

Do not use ammonium sulfate when spraying dormant alfalfa with **[INSERT BRAND NAME]**.

Do not use this product where a slight yield reduction in the first cutting of alfalfa cannot be tolerated.

Do not make more than one application per year.

Allow 36 hours after application before grazing livestock or harvesting.

Slight discoloration of the alfalfa may occur, but the alfalfa will regreen and regrow under moist soil conditions as effects of this product wear off.

Application of this product is limited to persons who have attended a Monsanto-approved training program. Application of this product can cause crop injury. Any crop injury is the sole responsibility of the applicator.

**B. FOR THE CONTROL OF ANNUAL WEEDS IN COASTAL BERMUDAGRASS PASTURES PRIOR TO SPRING GROWTH OR IMMEDIATELY AFTER FIRST CUTTING**

**DIRECTIONS FOR USE**

This product may be applied at 10 fluid ounces per acre to control the weeds listed below and most other winter annual grass and broadleaf weeds in established coastal bermudagrass pastures.

- |                        |                   |
|------------------------|-------------------|
| Annual bluegrass       | Oats              |
| Cheat                  | Ryegrass, Italian |
| Crabgrass              | Sandbur, field    |
| Henbit                 | Sunflower         |
| Johnsongrass, seedling | Wheat             |
| Little barley          | Wild mustard      |

**TIMING OF APPLICATION**

Applications prior to spring growth: Apply this product in either late winter or early spring, but before new coastal bermudagrass growth begins in the spring. Applications to new growth can damage the bermudagrass.

Remove domestic livestock from the pasture before making the application. Wait 60 days after making this application before grazing or harvesting the treated area.

Applications following the first cutting: Apply this product after the first bermudagrass cutting when the bermudagrass has not yet begun to regrow. Applications made after regrowth has begun can damage the bermudagrass.

Remove domestic livestock from the pasture before making the application. Wait 28 days after making this application before grazing or harvesting the treated area.

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**NOTE:** ONLY ONE APPLICATION PER YEAR MAY BE MADE TO ANY ONE FIELD. A SPRING APPLICATION PRIOR TO GROWTH AND AN APPLICATION FOLLOWING THE FIRST CUTTING MAY NOT BE MADE ON THE FIELD DURING THE SAME YEAR.

**C. FOR DISTRIBUTION AND USE ONLY WITHIN SOUTH DAKOTA. FOR NON-SELECTIVE CONTROL OF LISTED ANNUAL WEEDS IN SMALL GRAIN CROPPING SYSTEMS**

**DIRECTIONS FOR USE**

Refer to the [INSERT BRAND NAME] label for rate recommendations and weeds controlled.

For ground applications, use 3 to 5 gallons of water per acre. For aerial applications, use 2 to 3 gallons of water per acre.

**ATTENTION**

**AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.**

Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation since minute quantities of this herbicide can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour, or when other conditions, including lesser wind velocities, will allow spray drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) that are likely to drift. **AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.**

**NOTE:** To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

Adjust boom height on ground equipment to prevent streaked, overlapped or uneven applications. Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets.

In aerial applications, do not angle nozzles forward into the air stream and do not increase spray volume by increasing nozzle pressure.

Ensure uniform application. Use appropriate marking devices when applying herbicides by air.

Avoid spraying when weeds are subject to moisture stress, when dust is on foliage, or when straw canopy covers the weeds.

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

**D. LIMITATIONS ON AERIAL APPLICATION IN CALIFORNIA ONLY, INCLUDING FRESNO COUNTY, CALIFORNIA**

**DIRECTIONS FOR USE**

All labeled treatments may be made by aerial equipment where appropriate, provided that the applicator complies with the precautions and restrictions specified on this supplemental labeling and in the product label booklet. Refer to Aerial Equipment in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the product label for additional information. Refer to the individual use

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site section of the product label, or to other supplemental labeling or technical fact sheets published separately for this product by Monsanto, for specific use instructions.

**AVOID DRIFT—DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.**

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops.

1. Do not apply within 100 feet of all desirable vegetation or crop(s)
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.
4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

When applied as recommended under the conditions described, this product controls annual and perennial weeds listed in the label booklet.

When tank-mixing this product with 2,4-D, only 2,4-D amine formulations may be used for aerial application in California. Tank mixtures with 2,4-D amine formulations may be applied by air in California for fallow and reduced tillage systems, and for alfalfa and pasture renovation applications only.

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

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#### **ADDITIONAL INFORMATION FOR FRESNO COUNTY, CALIFORNIA**

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

North: Fresno County line  
South: Fresno County line  
East: State Highway 99  
West: Fresno County line

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

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

#### **Written Recommendations**

A written recommendation **MUST** be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation **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

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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.

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

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

For additional information on the proper aerial application of this product, call 916-784-1718.

### E. FOR AERIAL APPLICATION IN ARKANSAS ONLY

#### DIRECTIONS FOR USE

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.

Use the recommended rate of this product in 3 to 15 gallons of water per acre.

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

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. Avoid the use of nozzles with wide-angle discharge.

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

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

Use the following guidelines when applications are made near crops or other desirable vegetation:

1. Do not apply within 100 feet of any desirable vegetation or crops.
2. If wind up to 5 miles per hour 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 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.



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**F. USE ONLY FOR SEED PRODUCTION OF RICE WITH A ROUNDUP READY® GENE**

**NOTE:** THIS PRODUCT MAY BE USED FOR CONTROL OF NON-GLYPHOSATE TOLERANT RICE IN PRODUCTION FIELDS OF RICE CONTAINING A GLYPHOSATE TOLERANT GENE. SEVERE INJURY OR DEATH WILL RESULT IF RICE VARIETIES THAT DO NOT CONTAIN A GLYPHOSATE TOLERANT GENE ARE SPRAYED WITH THIS PRODUCT.

**DIRECTIONS FOR USE**

This product will control non-glyphosate tolerant rice in seed production fields of rice containing a glyphosate tolerant gene. Apply up to 44 fluid ounces of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. A second application up to 44 fluid ounces per acre may be applied, if needed to control non-glyphosate tolerant rice plants.

DO NOT EXCEED A MAXIMUM RATE OF 2.5 QUARTS OF THIS PRODUCT PER ACRE PER SEASON.

Application timing—This product can be applied to Roundup Ready rice from emergence to harvest.

Treated rice may not be used for food or feed. Do not feed or graze treated rice. Do not process treated rice for food or feed.

**G. FOR USE ONLY FOR SEED PRODUCTION OF WHEAT WITH A ROUNDUP READY® GENE**

**NOTE:** THIS PRODUCT MAY BE USED FOR CONTROL OF NON-GLYPHOSATE TOLERANT WHEAT IN PRODUCTION FIELDS OF WHEAT CONTAINING A GLYPHOSATE TOLERANT GENE. SEVERE INJURY OR DEATH WILL RESULT IF WHEAT VARIETIES THAT DO NOT CONTAIN A GLYPHOSATE TOLERANT GENE ARE SPRAYED WITH THIS PRODUCT.

**DIRECTIONS FOR USE**

This product will control non-glyphosate tolerant wheat in seed production fields of wheat containing a glyphosate tolerant gene. Apply up to 22 fluid ounces of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. A second application up to 22 fluid ounces per acre may be applied, if needed to control non-glyphosate tolerant wheat plants.

DO NOT EXCEED A MAXIMUM RATE OF 44 FLUID OUNCES OF THIS PRODUCT PER ACRE PER SEASON.

Application timing—This product can be applied to Roundup Ready wheat from emergence to harvest.

Treated wheat may not be used for food or feed. Do not feed or graze treated wheat. Do not process treated wheat for food or feed.

**H. FOR CONTROLLING BARNYARDGRASS (*ECHINOCHLOA CRUS-GALLI*) IN RICE USING RENOVATION TREATMENTS IN CALIFORNIA ONLY**

**DIRECTIONS FOR USE**

**Renovation Treatment**

**USE INSTRUCTIONS:** This product may be applied as a renovation treatment in rice crops to control barnyardgrass infestations using ground broadcast spray or hand-held equipment. Renovation is defined as herbicide treatment that will produce crop and weed destruction in an entire

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field or contiguous area treated within a field. Follow the application methods and recommended treatment rates in the label booklet for **[INSERT BRAND NAME]** herbicide.

**PRECAUTIONS, RESTRICTIONS:** Crop sprayed in the treated area will be killed. Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction. The rice straw and stubble from the treated area, including a 25-foot buffer zone on all sides, shall not be used for grazing, animal bedding or any feed purposes.

Aerial applications is not permitted for rice renovation using this supplemental labeling.

**I. ADDITION OF SURFACTANT FOR APPLICATIONS WITH **[INSERT BRAND NAME]****

Although not generally required, surfactant may be added to spray solutions at water carrier volumes above 30 gallons per acre or application rates below 16 fluid ounces of this product per acre.

Nonionic surfactants which are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactant, a rate of 0.25 to 0.5 percent surfactant concentration (1 to 2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 70 percent active ingredient, or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70 percent active ingredient is recommended. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

When applied as recommended under the conditions described, this product controls annual and perennial weeds listed in the label booklet.

**DO NOT** add buffering agents or pH adjusting agents to the spray solution when **[INSERT BRAND NAME]** is the only pesticide used. **DO NOT ADD SURFACTANT TO THIS PRODUCT FOR APPLICATIONS OVER THE TOP OF ROUNDUP READY CROPS AND PREHARVEST TO COTTON.**

**J. ADDITION OF SURFACTANT FOR APPLICATIONS WITH **[INSERT BRAND NAME]** (Alternate version)**

Although not generally required, surfactant may be added to this product. However, surfactant addition is recommended at water carrier volumes above 30 gallons per acre or rates below 16 fluid ounces per acre.

Nonionic surfactants which are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactant, a rate of 0.25 to 0.50 percent surfactant concentration (1 to 2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 70 percent active ingredient, or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70 percent active ingredient is recommended. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

When applied as recommended under the conditions described, this product controls annual and perennial weeds listed in the label booklet.

**DO NOT** add buffering agents or pH adjusting agents to the spray solution when **[INSERT BRAND NAME]** is the only pesticide used. **DO NOT ADD SURFACTANT TO THIS PRODUCT FOR APPLICATIONS OVER THE TOP OF ROUNDUP READY CROPS AND PREHARVEST TO COTTON.**

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**K. FOR USE ON ROUNDUP READY CANOLA AT HIGHER APPLICATION RATES**

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

**DO NOT USE THIS PRODUCT ON CANOLA WITH THE A GLYPHOSATE TOLERANT GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA.**

**Maximum Allowable Combined Application Quantities Per Season**

Preplant, At-Planting, Preemergence applications	44 fluid ounces per acre
Total in-crop application from emergence to 6-leaf stage	44 fluid ounces per acre

**Preplant, Preemergence, At-Planting**

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

**Postemergence**

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready canola from emergence through the 6-leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.

Weeds Controlled: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLES" in the label booklet.

Single Application—Apply 11 to 22 fluid ounces per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications that may result in temporary yellowing, delayed flowering, and or growth reduction. Similar injury may result when applications of more than 11 fluid ounces per acre are applied after the 4-leaf stage.

Sequential Application—Apply 22 fluid ounces 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 are recommended for early emerging annual weeds and perennial weeds such as Canada thistle and quackgrass or when controlling weeds with multiple application times.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. No more than two over-the-top broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application should not exceed 44 fluid ounces per acre. Allow a minimum of 60 days between last application and canola harvest.

**L. FOR CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT HORSEWEED (MARESTAIL, CONYZA CANADENSIS) IN CROP AND NON-CROP AREAS**

**DIRECTIONS FOR USE**

For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre. **For tank-mix recommendations, read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used.**

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#### **Cotton:**

##### **Preplant:**

For control of horseweed, apply this product (22 fluid ounces per acre) in a tank-mix with Clarity™ (8 fluid ounces per acre). This application must be made 21 to 35 days before planting and before horseweed reaches 6 inches in height. In order to avoid crop injury, a minimum interval of 21 days during which there is at least 1 inch of cumulative rainfall must be observed between Clarity application and planting of cotton.

2,4-D may be included in the tank-mixture with this product. Refer to the 2,4-D product label for the time intervals that are required between application and planting and other geographic use restrictions.

##### **Post-directed (Roundup Ready® cotton and Roundup Ready Flex cotton varieties only):**

Management of early season weed competition and the development of a crop height differential between cotton and horseweed is often achieved by a combination of preplant burndown and postemergence over-the-top and/or directed applications of this product. These measures enhance the development of a height differential that is necessary to successfully make post-directed treatments. In-crop, post-directed applications of MSMA (2 pounds active ingredient per acre) tank-mixed with diuron (0.5 to 0.75 pounds active ingredient per acre) should be made when the temperature is 80°F or higher.

#### **Soybeans:**

##### **Preplant:**

It is strongly encouraged that horseweed be controlled prior to planting. Apply a tank mixture of this product (22 fluid ounces per acre) with 2,4-D (0.5 pounds active ingredient per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting.

##### **In-crop (Roundup Ready Soybean varieties only):**

This treatment should be used as a salvage treatment only for a horseweed infestation that was not controlled preplant. At the time of treatment, horseweed should not exceed 6 inches in height. Apply a tank mixture of this product (22 fluid ounces per acre) with FirstRate (0.3 ounces per acre). Application should be made between full emergence of the first trifoliate leaf and 50 percent flowering stage of soybeans.

#### **Corn:**

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

Apply a tank mixture of this product (22 fluid ounces per acre) plus 2,4-D (0.5 pounds active ingredient per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting.

Dicamba may be included in the tank-mixture with this product. Refer to the dicamba product label for the time intervals that are required between application and planting and other geographic use restrictions.

Atrazine (1 to 2 pounds active ingredient per acre) may be included in the tank mixture to provide residual control. Refer to the atrazine product label for specific use instructions.

##### **In-crop (Roundup Ready Corn 2 hybrids only):**

Apply a tank mixture of this product (22 fluid ounces per acre) plus Clarity (8 to 16 fluid ounces per acre) or 2,4-D (0.5 to 1.0 pound active ingredient per acre) between corn emergence and the 5-leaf stage of growth (approximately 8 inches tall).

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Dicamba may be included in the tank-mixture with this product. Refer to the dicamba product label for the time intervals that are required between application and planting and other geographic use restrictions.

Tree and Vine Crops:

**Orchards (Pome Fruit, Stone Fruit and Tree Nuts).** Apply 44 fluid ounces of this product plus 2,4-D (18 fluid ounces per acre Dri-Clean® or 2 pints per acre Orchard Master® CA) before mareetail exceeds 6 inches in height. A carrier volume of 15 gallons per acre is recommended. Follow labeling for the 2,4-D product with regard to directions for use, precautionary statements and applicable schedules. Further local restrictions may apply.

**Vine crops (grapes only).** Apply this product at 44 fluid ounces per acre plus 2,4-D (18 fluid ounces per acre Dri-Clean®) before mareetail exceeds 6 inches in height. A carrier volume of 15 gallons per acre is recommended. Follow Dri-Clean® labeling in regard to directions for use, precautionary statements and applicable schedules. Further local restrictions may apply. In addition, residual herbicides such as diuron may provide additional preemergence control.

General Non-crop Areas:

Apply a tank mixture of this product (22 fluid ounces per acre) before horseweed exceeds 6 inches in height. Control may be enhanced by making applications when horseweed is still in the rosette stage of growth. This product may be tank-mixed with the following products provided that the specific product is registered for use on the target site. Refer to these product labels for approved sites and application rates. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive precautionary statements for each product in the mixture.

- 2,4-D<sup>1</sup>
- Crossbow™ L
- dicamba<sup>1</sup>
- Gallery™ 75 DF
- Krovar® I DF
- Landmark™ II MP
- Landmark™ MP
- Milestone™
- Overdrive®
- Telar™ DF
- Transline®
- Vanquish®
- Velpar® DF

<sup>1</sup>Tank mixtures with products containing this generic active ingredient may be made provided the specific product is registered for this use.

**ATTENTION**

**AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.**

**M. FOR USE ON RASBERRY CROPS**

**DIRECTIONS FOR USE**

**Raspberry Crops**

**TYPES OF APPLICATIONS:** Preplant (Site Preparation) Broadcast Sprays, General Weed Control, Middles (between rows of bushes), Strips (within rows of bushes), Selective Equipment (shielded

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sprayers, wiper applications), Directed Sprays, Spot Treatment, Perennial Grass Suppression, Cut Stump.

Applications may be made with boom equipment, CDA equipment, shielded sprayers, hand-held and backpack wands, lances, orchard guns or with wiper applicator equipment, except as directed.

PRECAUTIONS, RESTRICTIONS: To avoid damage, herbicide sprays must not be allowed to contact desirable vegetation, including green shoots and foliage. Allow a minimum of 14 days between last application and harvest.

GENERAL USE INSTRUCTIONS:

Apply 11 fluid ounces to 3.3 quarts of this product per acre according to the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label. Utilize rates at the higher end of the recommended rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7 quarts per acre per year.

Allow a minimum of 3 days between application and transplanting.

N. FOR WEED CONTROL APPLICATIONS IN SEED PRODUCTION OF ROUNDUP READY® ALFALFA

DIRECTIONS FOR USE

General Information

MONSANTO COMPANY RECOMMENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON ALFALFA VARIETIES DESIGNATED AS CONTAINING A GLYPHOSATE TOLERANT GENE.

The Roundup Ready designation indicates that the alfalfa contains a patented gene that provides tolerance to this product. Information on Roundup Ready alfalfa varieties may be obtained from your seed supplier or Monsanto representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

See the "ROUNDUP READY CROPS" section of the [INSERT BRAND NAME] label booklet for general precautionary instructions for use in Roundup Ready crops. Do NOT combine the instructions in this supplemental label with other recommendations made for alfalfa varieties that do not contain a Roundup Ready gene listed in the "PASTURE GRASSES, FORAGE LEGUMES, AND RANGELANDS" section of the [INSERT BRAND NAME] label booklet.

Application Instructions

This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa grown for seed. In-crop applications may be made from emergence through the late vegetative stage, and spot treatments may be made from early bud stage through seed harvest.

For ground applications with broadcast equipment, apply this product in 3 to 40 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

For aerial application: Use the recommended rates of this product in 3 to 15 gallons of spray solution per acre.

DO NOT EXCEED 44 FLUID OUNCES OF THIS PRODUCT PER ACRE WHEN MAKING APPLICATIONS BY AIR. FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATION IN THAT STATE. AVOID DRIFT. EXTREME

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CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANT GENE. Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions that favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the label booklet for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment.

**Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready alfalfa. Follow the cleaning procedures specified on the label of the product(s) used. Alfalfa can be very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

**TYPES OF APPLICATIONS:** Preplant, At-planting, Preemergence, Postemergence and Post-harvest of seed

**Maximum Application Rates**

Combined total per year for all applications	5.3 quarts per acre
Total of all Preplant, At-planting and Preemergence applications	44 fluid ounces per acre
Total in-crop application rate from emergence through the late vegetative stage *	4.0 quarts per acre
Spot-treatment during early bud stage through seed harvest (See the "Spot Treatment after late vegetative stage" section and the "PRECAUTIONS AND RESTRICTIONS" section of this label for complete instructions)	Apply spray-to-wet; do not apply to the point of runoff

**There are no rotational crop restrictions following applications of this product. For any crop NOT listed in the label booklet, applications must be at least 30 days prior to planting.**

**Over-the-top applications:** Broadcast applications of this product may be made using ground or aerial equipment in-crop to Roundup Ready alfalfa from emergence through the late vegetative stage. Do not make broadcast applications of this product between the initiation of alfalfa budding and the harvest of seed. Any single over-the-top broadcast application of this product should not exceed 44 fluid ounces per acre. Sequential applications of this product should be at least 7 days apart.

Due to the biology and breeding constraints of alfalfa, up to 10% of the seedlings are susceptible and will not survive or thrive after the first application of this product. A single application of at least 22 fluid ounces per acre of this product should be applied at or before the 3 to 4 trifoliolate growth stage to eliminate the effects of stand gaps created by the loss of non-Roundup Ready plants.

**Spot Treatment after late vegetative stage:** For late emerging weeds, this product may be applied as a spot treatment in Roundup Ready alfalfa grown for seed, during the early bud stage through seed harvest. Applications made during this stage may result in reduced seed yield and quality and are the responsibility of the grower. Make applications on a spray-to-wet basis. Do not spray to the point of runoff. If a spot treatment is made after the late vegetative stage, harvested seed must not be used for alfalfa sprout production.

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**Post-harvest applications:** Following harvest of Roundup Ready alfalfa seed, the stand may be managed for forage and hay production. Refer to the Roundup Ready alfalfa section of the [INSERT BRAND NAME] label booklet for rates and timing of applications for forage and hay production.

**Weeds controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS RATE SECTION" and the "PERENNIAL WEEDS RATE SECTION" in the [INSERT BRAND NAME] label booklet. Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some re-growth of weeds has occurred.

In addition to those weeds listed in the [Insert Brand Name] label booklet, this product will suppress or control the parasitic weed, Dodder (*Cuscuta spp.*) in Roundup Ready alfalfa seed production. Repeat applications may be necessary for complete control.

Tank mixtures with other herbicides, insecticides, or fungicides may result in crop injury or reduced weed control and are NOT recommended for over-the-top applications of this product.

**PRECAUTIONS AND RESTRICTIONS:** Do not make over-the-top broadcast applications of this product between the initiation of alfalfa budding and the harvest of Roundup Ready alfalfa seed. The use of harvested Roundup Ready alfalfa seed is not suitable for, and is not recommended for, production of alfalfa sprouts.

Read the "LIMIT OF WARRANTY OR LIABILITY" in the label booklet for [INSERT BRAND NAME] before using. For over-the-top (in-crop) uses on Roundup Ready crop varieties, crop safety and weed control performance are not warranted by Monsanto when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

O. BROADCAST APPLICATIONS IN CHRISTMAS TREE PLANTATIONS.

DIRECTIONS FOR USE

**NOTE: IF IMPROPERLY APPLIED, THIS PRODUCT HAS THE POTENTIAL TO CAUSE SEVERE CHRISTMAS TREE INJURY. FOLLOW ALL LABEL DIRECTIONS.**

This product may be applied as a broadcast spray over established Christmas trees. Ensure that adequate buffers are maintained to prevent drift onto nearby desirable crops or vegetation. Read the entire "APPLICATION EQUIPMENT AND TECHNIQUES" section of the [INSERT BRAND NAME] label booklet for additional application precautions.

This application is approved for the following Christmas tree species:

Douglas fir (*Pseudotsuga menziesii*)

Fir species (*Abies spp.*)

Spruce species (*Picea spp.*)

Applications may be made only after trees have completed at least a full growing season since planting or transplanting. Applications should not be made within 1 full year prior to tree harvest.

Applications may only be made in the fall after the formation of final conifer resting buds. Final resting buds must be fully hardened and in the dormant stage. Applications made at any other time may result in unacceptable Christmas tree injury.

Avoid spray pattern overlap, as injury may occur.

Apply 22 fluid ounces of this product per acre in 5 to 30 gallons of water per acre.



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**NOTE: DO NOT ADD SURFACTANTS, ADDITIVES CONTAINING SURFACTANTS, OR ANY OTHER ADDITIVES TO THIS PRODUCT AS SEVERE CHRISTMAS TREE INJURY MAY RESULT.**

This product may be used at rates from 22 to 44 fluid ounces per acre in some areas. Consult your local Monsanto representative or Roundup supplier for specific recommendations if you require rates greater than 22 fluid ounces per acre.

Drift control additives may increase Christmas tree injury and their use is not recommended.

The use of other herbicides tank mixed with this product is not recommended since severe Christmas tree injury may result.

**P. PREHARVEST AND SPOT-TREATMENT OF WEEDS IN DRY PEAS, LENTILS, AND CHICKPEAS** For distribution and use only in the States of Colorado, Idaho, Iowa, Minnesota, Montana, Nebraska, North Dakota, Oregon, South Dakota, Washington and Wisconsin

**DIRECTIONS FOR USE**

See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the **[INSERT BRAND NAME]** label booklet for more information.

To minimize drift, use nozzles that emit medium to large-sized droplets. The likelihood of drift occurring from the use of 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. Extreme care must be used when applying this product to avoid injury to desirable plants and crops.

**BROADCAST SPRAY**

**USE INSTRUCTIONS:** This product may be applied as an over-the-top broadcast spray to control labeled weeds prior to the harvest of dry peas, lentils, and chickpeas. Apply up to 17 fluid ounces in 3 to 20 gallons of water per acre at the hard dough stage of the legume seed (30 percent grain moisture or less). Either ground broadcast or aerial applications may be made.

**PRECAUTIONS, RESTRICTIONS:**

- Apply at least 14 days before harvest.
- Only one application per year may be made; do not combine a preharvest spray with a spot treatment on the same crop area.
- Employ at least a 30-day plant-back interval between treatment and replanting for any crop not listed in the **[INSERT BRAND NAME]** label.
- Preharvest application is not recommended for peas, lentils, or chickpeas grown for seed, as a reduction in germination or vigor may occur.
- Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system.
- Do not treat field (feed) peas, since these are considered to be grown as livestock feed.

**SPOT TREATMENTS**

**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 peas, lentils, and chickpeas. Apply up to 17 fluid ounces in 10 to 20 gallons of water through ground spray equipment or use a 2 percent solution in a hand-held sprayer. For best results, applications

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should be made at or beyond the bud stage of growth. The crop receiving spray in treated areas will be killed.

PRECAUTIONS, RESTRICTIONS:

- Apply at least 14 days before harvest.
- Only one application per year may be made; do not combine spot treatments with a preharvest broadcast spray on the same crop area.
- Employ at least a 30-day plant-back interval between treatment and replanting for any crop not listed in the [INSERT BRAND NAME] label.
- Do not feed treated vines and hay from these crops to livestock.
- Do not treat field (feed) peas, since these are considered to be grown as livestock feed.

Q. FOR APPLICATIONS TO ROUNDUP READY COTTON IN THE STATE OF ARIZONA ONLY

**DIRECTIONS FOR USE**

**GENERAL INFORMATION**

**ATTENTION:** MONSANTO RECOMMENDS THIS PRODUCT FOR USE ONLY OVER-THE-TOP OF OR DIRECTED ONTO IMPROVED COTTON VARIETIES THAT ARE DESIGNATED AS COTTON WITH A ROUNDUP READY GENE. **SEVERE INJURY OR DEATH OF COTTON WILL RESULT IF ANY COTTON VARIETIES NOT PROPERLY DESIGNATED AS HAVING A ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT,** AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIREABLE PLANTS AND TREES, OTHER THAN CROPS WITH A ROUNDUP READY GENE, SINCE SEVERE INJURY OR DESTRUCTION WILL RESULT.

ROUNDUP READY COTTON VARIETIES MUST BE PURCHASED FROM AN AUTHORIZED LICENSED SEED SUPPLIER. THE DESIGNATION "ROUNDUP READY" INDICATES THE COTTON VARIETY CONTAINS A PATENTED PROPRIETARY TRAIT.

See "GENERAL INFORMATION" and "MIXING sections of the label booklet for [INSERT BRAND NAME] for essential product performance information.

TYPES OF APPLICATION: Preplant, At-Planting, Preemergence, Over-the-top, Selective Equipment, Preharvest

<b>Maximum Allowable Combined Application Quantities Per Season</b>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-Planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from ground cracking to layby	2.5 quarts per acre
<ul style="list-style-type: none"> <li>• Total in-crop over-the-top from ground cracking to 4-leaf stage</li> <li>• Total in-crop applications using selective equipment through layby</li> </ul>	2.0 quarts per acre 1.3 quarts per acre
Maximum preharvest application rate	44 fluid ounces per acre

**PRECAUTIONS, RESTRICTIONS:** See the "ROUNDUP READY CROPS" section of the [INSERT BRAND NAME] label booklet for general precautionary instructions for use in Roundup Ready crops. Do NOT combine these instructions with other recommendations made for crop varieties that do not contain a Roundup Ready gene, in the "ANNUAL AND PERENNIAL CROPS

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(Alphabetical)" section of the **[INSERT BRAND NAME]** label booklet. The combined total application of this product from cotton emergence until harvest must not exceed 4 quarts per acre.

NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT.

NO MORE THAN TWO POST-DIRECTED APPLICATIONS SHOULD BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY.

SEQUENTIAL IN-CROP OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS.

ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST. APPLICATIONS MADE IN EXCESS OF MAXIMUM LABEL RATES ARE EXPECTED TO RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS AND ARE THE SOLE RESPONSIBILITY OF THE GROWER.

THE MAXIMUM USE RATES STATED THROUGHOUT THIS PRODUCT'S LABELING APPLY TO THIS PRODUCT COMBINED WITH THE USE OF ALL OTHER HERBICIDES CONTAINING GLYPHOSATE AS THE ACTIVE INGREDIENT, WHETHER APPLIED AS MIXTURES OR SEPARATELY. CALCULATE THE APPLICATION RATES AND ENSURE THAT THE TOTAL USE OF THIS AND OTHER GLYPHOSATE-CONTAINING PRODUCTS DOES NOT EXCEED STATED MAXIMUM USE RATE.

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

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

#### **Over-the-top:**

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment at rates up to 22 fluid ounces per acre per application postemergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Unless otherwise directed in this supplemental label, any single over-the-top broadcast application should not exceed 22 fluid ounces per acre. Combined over-the-top applications between ground cracking until the 4-leaf (node) stage should not exceed 2.0 quarts per acre.

NOTE: For specific rates of application and instructions, refer to the "ANNUAL" and "PERENNIAL WEEDS RATE TABLES" in the label booklet for **[INSERT BRAND NAME]**.

#### **Selective Equipment:**

USE INSTRUCTIONS: This product may be applied in-crop using precision post-directed or hooded sprayers to Roundup ready cotton through layby. Unless otherwise directed in this supplemental label, any single application using selective equipment should not exceed 22 fluid ounces per acre. Sequential in-crop applications using selective equipment may be made up to a maximum of 1.3 quarts per acre.

At this stage, post-directed equipment should be used which directs the spray to the base of the cotton plants. Contact of the spray with cotton leaves should be avoided to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the **[INSERT BRAND NAME]** label booklet for information on proper use and calibration of this equipment. The combined total of in-crop over-the-top plus selective equipment applications must not exceed 2.6 quarts per acre.

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**Salvage Treatment:**

USE INSTRUCTIONS: From the ground cracking stage through layby, where weeds threaten to cause the loss of the crop, applications of up to 32 fluid ounces per acre may be applied either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds. **NOTE: CROP TOLERANCE OF ROUNDUP READY COTTON HAS NOT BEEN FULLY TESTED AT THIS APPLICATION RATE. SALVAGE TREATMENTS ARE EXPECTED TO RESULT IN SIGNIFICANT BOLL LOSS, DLEAYED MATURITY AND/OR YIELD LOSS AND ARE THE SOLE RESPONSIBILITY OF THE GROWER. NO MORE THAN TWO SALVAGE TREATMENTS SHOULD BE USED PER GROWING SEASON.**

PRECAUTIONS, RESTRICTIONS: The combined total of in-crop over-the-top plus selective equipment applications must not exceed 2.6 quarts per acre.

**Preharvest:**

USE INSTRUCTIONS: This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boll crack. Up to 1.3 quarts per acre of this product may be applied using either aerial or ground spray equipment. **NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Do not apply [INSERT BRAND NAME] preharvest to Roundup Ready cotton grown for seed.

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT 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.

**R. FOR APPLICATIONS TO ROUNDUP READY FLEX COTTON IN THE STATE OF ARIZONA ONLY**

**DIRECTIONS FOR USE**

**GENERAL INFORMATION**

The use of the over-the-top applications described in this label on *other* than Roundup Ready Flex cotton will cause crop injury and reduced yields. Drift of this product from applications made to Roundup Ready Flex cotton onto adjacent fields of post 4-leaf (node) Roundup Ready cotton may cause extensive injury including boll loss, delayed maturity and/or yield loss.

**NOTE:** The instructions provided in this supplemental label are specific to, and should only be used with varieties designated as **Roundup Ready Flex cotton**. **DO NOT** combine the instructions in this supplemental label with those in the "Roundup Ready Cotton" or "Roundup Ready Flex Cotton" sections found in the label booklet for [INSERT BRAND NAME], or with *any other* Roundup Ready cotton or Roundup Ready Flex cotton instructions on labeling for this or other glyphosate-containing product. See "Maximum Application Rates" in the "GENERAL INFORMATION" section of the label booklet for [INSERT BRAND NAME] for additional information.

ROUNDUP READY FLEX COTTON VARIETIES MUST BE PURCHASED FROM AN AUTHORIZED LICENSED SEED SUPPLIER. THE DESIGNATION, "ROUNDUP READY", INDICATES THE COTTON VARIETY CONTAINS A PATENTED PROPRIETARY TRAIT.

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

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Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	5.3 quarts per acre
Calculate the combined rate to be used for all preplant, in-crop and preharvest applications, to ensure that the total does not exceed the maximum allowed rate per acre per year shown above.	
Preplant, At-Planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from ground cracking to 60% percent open bolls	4.0 quarts per acre
Maximum allowed from 60 percent bolls open to 7 days prior to harvest	44 fluid ounces per acre

**PRECAUTIONS, RESTRICTIONS:** See the "ROUNDUP READY CROPS" section of the [INSERT BRAND NAME] label booklet for general precautionary instructions for use in Roundup Ready crops.

**Preplant, At-Planting, Preemergence**

**USE INSTRUCTIONS:** This product may be applied before, during or after planting Roundup Ready Flex cotton.

**Postemergence**

**USE INSTRUCTIONS:** When applied in accordance with this label, [INSERT BRAND NAME] will control labeled annual grasses and broadleaf weeds 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. In general, an initial application of 22 fluid ounces per acre on 1 to 3 inch tall annual grass and broadleaf weeds is recommended. This product may be applied by ground application equipment at rates up to 44 fluid ounces per acre per application postemergence to Roundup Ready Flex cotton. In addition to broadcast applications, post-directed equipment may be used to achieve weed coverage.

**NOTE:** For specific rates of application and instructions, refer to the "ANNUAL" and "PERENNIAL WEEDS RATE TABLES" in the label booklet for Roundup WeatherMAX herbicide.

**PRECAUTIONS, RESTRICTIONS:** The maximum rate for any single in-crop application of this product is 44 fluid ounces per acre made 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, may cause a crop response, including leaf speckling or leaf necrosis.** Do not exceed a maximum rate of 32 fluid ounces per acre of this product when making applications by air. Between layby and 60 percent open bolls, the maximum combined total rate of this product that may be applied is 44 fluid ounces per acre. The maximum combined total of all applications made from crop emergence to 60 percent open bolls must not exceed 4.0 quarts per acre.

**Preharvest**

**USE INSTRUCTIONS:** This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready Flex cotton after 60 percent boll crack. Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment.

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

**PRECAUTIONS, RESTRICTIONS:** Allow a minimum of 7 days between application and harvest of Roundup Ready Flex cotton. Do not apply this product over-the-top beyond first bloom to cotton grown for seed.

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

**S. FOR USE IN HYBRID ROUNDUP READY CANOLA SEED PRODUCTION SYSTEMS**

**DIRECTIONS FOR USE**

**Note:** The instructions provided in this supplemental label are specific to hybrid Roundup Ready canola seed production. Do Not combine the instructions in this supplemental label with those for weed control in the "Roundup Ready Canola" section of the [INSERT BRAND NAME] label booklet, or with any other Roundup Ready canola instructions on labeling for this or other glyphosate-containing product.

**GENERAL INFORMATION**

MONSANTO COMPANY RECOMMENDS USE OF THIS PRODUCT ONLY ON CANOLA WHICH CONTAINS A ROUNDUP READY GENE. DO NOT USE THIS PRODUCT ON CANOLA WITH A ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA.

Applying this product to canola which is not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants which do not contain a Roundup Ready gene since severe injury or destruction will result.

The Roundup Ready designation indicates the canola contains a patented gene which provides tolerance to this herbicide. Information on Roundup Ready canola may be obtained from your seed supplier or Monsanto representative.

**USE INSTRUCTIONS**

**Preplant, At-Planting, Preemergence**

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment before, during or after planting canola. The maximum combined application rate from all preplant and preemergence applications should not exceed 44 fluid ounces per acre per season.

In no-till and stale seedbed systems, always use a burndown treatment to control existing weeds before canola emerges. Apply a preplant burndown treatment of 11 to 22 fluid ounces per acre of this product.

**Postemergence**

USE INSTRUCTIONS: This product may be applied using ground broadcast equipment for the control of non-glyphosate tolerant canola pollen parental line(s) in hybrid canola seed production fields containing both a Roundup Ready canola line(s) and a non-glyphosate tolerant line(s).

When pollination is complete or near completion, the non-glyphosate tolerant pollen parental line(s) may be controlled with an application of 11 to 22 fluid ounces per acre of [INSERT BRAND NAME].

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Sequential applications may be used for the control of non-glyphosate tolerant pollen parental line(s) but the maximum combined total rate must not exceed 22 fluid ounces per acre. Allow at least 5 days between sequential applications.

**Maximum Allowable Combined Application Quantities Per Season**

Preplant and preemergence applications	44 fluid ounces per acre
Total in-crop application rate	22 fluid ounces per acre

**Sprayer Preparation**

It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready canola. Follow the cleaning procedures specified on the label of the product(s) previously used. Canola can be very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

**For ground applications** with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment use the flat fan nozzles. Check for even distribution of spray droplets.

**AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A ROUNDUP READY GENE. DO NOT APPLY DURING LOW-LEVEL INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.**

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of 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) which are likely to drift. **AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.**

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

**Read the "LIMIT OF WARRANTY AND LIABILITY" in the label booklet for [INSERT BRAND NAME] before using. For over-the-top uses on Roundup Ready crop varieties, crop safety and weed control performance are not warranted by Monsanto when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.**

**T. FOR CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT PALMER AMARANTH (*Amaranthus palmeri*) IN COTTON, CORN, AND SOYBEANS**

**DIRECTIONS FOR USE**

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**GENERAL INFORMATION**

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See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for [INSERT BRAND NAME] for essential product performance information.

This product may be tank-mixed with other herbicides for application in accordance with label directions. Follow all precautions and use instructions contained within the product's labeling in accordance with the most restrictive label limitations. Some products have the potential to cause *crop injury under certain conditions, at certain crop growth stages, and/or other circumstances*. Read all labels for products used in tank mixtures to determine the potential for injury prior to use. Always predetermine the compatibility of all products used in the tank mixture by mixing small proportional quantities in advance. A tank mixture of this product with other herbicides may cause incompatibility, antagonism, or a reduction in product efficacy. Monsanto has not tested all tank mix product formulations for compatibility, performance, and crop safety.

**Management of glyphosate resistant Palmer amaranth:**

If a naturally occurring glyphosate resistant biotype of Palmer amaranth is present, this product should be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control. Cultural and mechanical control practices (e.g. crop rotation or tillage) may also be used as appropriate.

Not all herbicides are registered in each state or for all sites or crops for the management of Palmer amaranth. When [INSERT BRAND NAME] is used in combination with other herbicides, refer to each product's label and observe all precautions and limitations on the label.

Tillage or a burndown herbicide application is encouraged prior to planting.

**Cotton:****Preplant, At-Planting, Preemergence:**

Apply [INSERT BRAND NAME] to control emerged weeds in a tank-mix with a preemergence soil residual herbicide product labeled for control of Palmer amaranth such as pendimethalin (Prowl H20) and/or fluometuron (Cotoran).

**Postemergence (In-crop) in Roundup Ready Flex Cotton and Roundup Ready Cotton:**Preemergence to glyphosate resistant Palmer amaranth:

Apply [INSERT BRAND NAME] to control emerged weeds, in a tank-mix with metolachlor (prior to the 4-leaf stage in Roundup Ready cotton) for the control of Palmer amaranth.

Preemergence to glyphosate resistant Palmer amaranth at layby:

Apply [INSERT BRAND NAME] to control emerged weeds, in a tank-mix with a residual herbicide product such as diuron (Direx) or flumioxazin (Valor) post-directed to control Palmer amaranth.

Postemergence to glyphosate resistant Palmer amaranth:

Apply [INSERT BRAND NAME] to control emerged weeds, in a tank-mix of MSMA and diuron (Direx) or flumioxazin (Valor), to control emerged Palmer amaranth.

**Soybeans:****Preplant, At-Planting, Preemergence:**Preemergence to glyphosate resistant Palmer amaranth:

Apply [INSERT BRAND NAME] to control emerged weeds, in a tank-mix with a preemergence residual herbicide product such as alachlor (INTRRO) or another residual herbicide for control of Palmer amaranth. For preplant applications 2,4-D may be added to the tank-mix to help control



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emerged broadleaf weeds. Follow label instructions regarding application timing relative to soybean planting.

Postemergence to glyphosate resistant Palmer amaranth:

Apply [INSERT BRAND NAME] to control emerged weeds, in a tank-mix with lactofen (Cobra) or fomesafen (Flexstar) to control emerged Palmer amaranth.

**Corn:**

**Preplant, At-Planting, Preemergence:**

Apply [INSERT BRAND NAME] to control emerged weeds, in a tank-mix with a preemergence residual herbicide such as Harness Xtra, Harness Xtra 5.6L, Degree Xtra or another residual herbicide for the control of Palmer amaranth.

**Postemergence in Roundup Ready Corn 2 (in-crop):**

Preemergence to glyphosate resistant Palmer amaranth:

Apply [INSERT BRAND NAME] to control emerged weeds, in a tank-mix with a preemergence residual herbicide product such as Harness Xtra, Harness Xtra 5.6L, Degree Xtra or another residual herbicide for the control of Palmer amaranth.

Postemergence to glyphosate resistant Palmer amaranth:

Apply [INSERT BRAND NAME] in a tank-mix with other herbicides such as 2,4-D, dicamba (Clarity, Banvel, or Distinct) to control emerged weeds and a residual herbicide product such as Harness Xtra, Harness Xtra 5.6L, Degree Xtra for continued control of Palmer amaranth. Observe all maximum annual application rate and timing restrictions.

**U. FOR CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT RYEGRASS**

**DIRECTION FOR USE**

**GENERAL INFORMATION**

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for [INSERT BRAND NAME] for essential product performance information.

This product may be tank-mixed with other herbicides for application in accordance with label directions. Follow all precautions and use instructions contained within the product's labeling in accordance with the most restrictive label limitations. Some products have the potential to cause crop injury under certain conditions, at certain crop growth stages and/or under other circumstances. Read all labels for products used in tank mixtures to determine the potential for crop injury prior to use. Always predetermine the compatibility of all products used in the tank mixture by mixing small proportional quantities in advance. A tank mixture of this product with other herbicides may cause incompatibility, antagonism, or a reduction in product efficacy. Monsanto has not tested all tank mix product formulations for compatibility, performance, and crop safety.

Not all herbicides are registered in each state or for all use-sites (orchards, non crop areas, or ditch banks) or crops for the management of ryegrass. When [INSERT BRAND NAME] is used in combination with other herbicides, refer to each product's label and observe all precautions and limitations.

**Preemergence to glyphosate resistant ryegrass:**

Apply [INSERT BRAND NAME] to control other emerged weeds, in a tank-mix with a preemergence herbicide product labeled for control of ryegrass.

**Preemergence and Postemergence to glyphosate resistant ryegrass:**

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Apply **[INSERT BRAND NAME]** to control other emerged weeds, in a tank-mix with a residual preemergence herbicide product and a postemergence herbicide product (other than glyphosate) labeled for control of ryegrass. Make applications before ryegrass exceeds 4 inches in height.

**Postemergence to glyphosate resistant ryegrass:**

Apply **[INSERT BRAND NAME]** to control other emerged weeds, in a tank-mix with another postemergence herbicide product labeled for control of ryegrass. Make applications before ryegrass exceeds 4 inches in height.

**V. FOR USE FOR SELECTIVE WEED CONTROL ON [INSERT BRAND NAME] TOLERANT PURE GOLD<sup>®</sup> TALL FESCUE AND AURORA GOLD<sup>®</sup> FINE FESCUE SELECTIONS**

**DIRECTIONS FOR USE**

**[INSERT BRAND NAME] Tolerant Tall Fescue Selections For Seed Production**

Use this product on **[INSERT BRAND NAME]** tolerant tall and fine fescue grown for seed production only.

This product may be applied at rates of 3 to 11 fluid ounces per acre as a postemergence spray on **[INSERT BRAND NAME]** tolerant tall fescue selections. See the label booklet for application instructions, rate recommendations, weeds controlled and proper growth stage of weeds.

When applied postemergence, this product will control or suppress the following weeds: annual bluegrass mustards, downy brome, cheatgrass, chickweed, pennycress, fleabane, shepherd's-purse, sowthistle, wild oat, dandelion, quackgrass, and Canada thistle. See the **[INSERT BRAND NAME]** label booklet for a complete list of weeds controlled or suppressed.

**NOTE:** The recommended rate for this use will limit the level of control of certain species of weeds.

**NOTE:** Some crop discoloration and yellowing may occur at higher rates of application with **INSERT BRAND NAME]** tolerant tall and fine fescue selections. Reduction in stand of these selections may occur under stress conditions.

**Timing Of Applications**

Applications can be made 6 weeks after germination and to established crops after growth resumes in the Fall until onset of dormancy and in the Spring after dormancy break until 60 days prior to harvest.

Avoid spraying during or within two weeks after periods when air temperatures fall below 25°F.

Remove domestic livestock from the seed production field prior to application. Wait 60 days after making this application before grazing or harvesting the treated area.

**NOTE:** Only two applications per crop growth cycle may be made to any one site. If two applications are required, only one Fall and one Spring application may be made during one 12 month cycle.

**W. [INSERT BRAND NAME] HERBICIDE AND TANK MIXTURE RATE RECOMMENDATIONS FOR NON-CROP AREAS**

**DIRECTIONS FOR USE**

Do not allow spray mixtures of this herbicide to mist, drip, drift or splash onto desirable vegetation since injury or destruction may occur. Do not apply when wind or other conditions favor drift.

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See the "WEEDS CONTROLLED" section of the [INSERT BRAND NAME] label booklet for rate recommendations. For difficult to control species, where dense stands occur, or where conditions for control are not ideal, 4 to 7 quarts per acre of this product may be used for improved results.

**TANK MIXTURES**

This product provides control of the emerged weeds listed in the label booklet. When applied as a tank mixture, the following herbicides will provide preemergence and/or postemergence control of the weeds listed in the individual product labels.

The following list of products may be tank mixed with this product, provided that the specific product is registered for application to the target site. Any recommended rate of this product may be used in a tank mixture with these products. Refer to these product labels for approved sites and application rates.

Tank-Mix Product(s)	Rate per Acre
Arsenal™	0.5 to 4 pints
2,4-D	0.5 to 1 pound
Garlon™ 3A	1 to 6 pints
Garlon 4	1 to 6 pints
diuron	4 to 8 pounds
diuron + 2,4-D	4 to 8 pounds + 0.5 to 1 pound
diuron + Garlon 3A	4 to 10 pounds + 1 to 2 pints
diuron + Garlon 4	4 to 10 pounds + 1 to 2 pints
Hyvar™ X	4 to 8 pounds
Hyvar X + 2,4-D	4 to 8 pounds + 0.5 to 1 pound
Hyvar X + Garlon 3A	4 to 8 pounds + 1 to 2 pints
Hyvar X + Garlon 4	4 to 8 pounds + 1 to 2 pints
Krovar™ I DF	4 to 6 pounds
Krovar I DF + 2,4-D	4 to 6 pounds + 0.5 to 1 pound
Krovar I DF + Garlon 3A	4 to 6 pounds + 1 to 2 pints
Krovar I DF + Garlon 4	4 to 6 pounds + 1 to 2 pints
Oust™	2 to 6 ounces
Oust + 2,4-D	2 to 6 ounces + 0.5 to 1 pound
Oust + Garlon 3A	2 to 6 ounces + 1 to 2 pints
Oust + Garlon 4	2 to 6 ounces + 1 to 2 pints
Spike™ 80W	2 to 5 pounds
Spike 80W + 2,4-D	2 to 5 pounds + 0.5 to 1 pound
Spike 80W + Garlon 3A	2 to 5 pounds + 1 to 2 pints
Spike 80W + Garlon 4	2 to 5 pounds + 1 to 2 pints

\* Arsenal is not approved for use in the state of California.

Refer to the individual product labels for specific non-crop sites, rates, carrier volumes and precautionary statements.

Read and carefully observe the label claims, cautionary statements, recommended use rates and all other information on the labels of all products used in these tank mixtures. Use according to the most restrictive label directions for each product in the mixture.

Maintain good agitation at all times during the mixing process. Ensure that the tank-mix products are well mixed with the spray solution before adding this product.

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Mix only the quantity of spray solution that can be used during the same day. Tank mixtures allowed to stand overnight may result in reduced weed control.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

When used in combination as recommended by Monsanto Company, the liability of Monsanto shall in no manner extend to any damage, loss or injury not solely and directly caused by the inclusion of the Monsanto product in such combination use.

## X. TANK MIXTURES FOR IMPROVED CONTROL OF BENTGRASS (*Agrostis* spp.)

### DIRECTIONS FOR USE

[INSERT BRAND NAME] herbicide may be tank mixed with the products listed below for improved control of bentgrass (*Agrostis* spp.). When tank mixing, read and carefully observe label directions, cautionary statements and all information on the labels of each product used. Refer to each individual product label for approved use sites.

ENVOY®

FUSILADE® II

FUSION®

VANTAGE®

Dry ammonium sulfate, at 1 to 2 percent by weight, may be added to the spray solution for the above applications. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

#### Broadcast Treatment

- Apply 1.6 to 2.2 quarts per acre of this product plus 34 fluid ounces per acre of **Envoy** in 20 to 40 gallons per acre of spray solution.
- Apply 1.6 to 2.2 quarts per acre of this product plus 24 fluid ounces per acre of **Fusilade II** in 20 to 40 gallons per acre of spray solution.
- Apply 1.6 to 2.2 quarts per acre of this product plus 60 fluid ounces per acre of **Vantage** in 20 to 40 gallons per acre of spray solution.
- Apply 1.6 to 2.2 quarts per acre of this product plus 9 fluid ounces per acre of **Fusion** in 20 to 40 gallons per acre of spray solution.

Re-treatment may be needed in the event of incomplete control.

#### Spot Treatment

- Mix 1.5 fluid ounces of this product with 1.3 fluid ounces of **Envoy** in one gallon of water and spray-to-wet.
- Mix 1.5 fluid ounces of this product with 0.75 fluid ounces of **Fusilade II** in one gallon of water and spray-to-wet.
- Mix 1.5 fluid ounces of this product with 3 fluid ounces of **Vantage** in one gallon of water and spray-to-wet.
- Mix 1.5 fluid ounces of this product with 0.25 fluid ounces of **Fusion** in one gallon of water and spray-to-wet.

**ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.**

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All other trademarks are the property of their respective owners.

Y. ALTERNATE INGREDIENT STATEMENT

[INSERT INTO SUPPLEMENTAL LABEL TEMPLATE AS INDICATED]

ACTIVE INGREDIENT:

\*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt.....48.8%

OTHER INGREDIENTS: ..... 51.2%

100.0%

\*Contains 660 grams per liter or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per liter or 4.5 pounds per U.S. gallon of the acid, glyphosate.

Product Description: This product is a postemergence, systemic herbicide with no soil residual activity. It gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid containing 10 percent surfactant.

This product is protected by U.S. Patent No's. 5,668,085 and 6,365,551. Other patents pending. No license granted under any non-U.S. patent(s).