



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

July 22, 2025

Ian Murphy
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BAYER CROPSCIENCE LP

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment - Revision to Use Rates and Formatting of Label
Product Name: ROUNDUP PRO CONCENTRATE
Admin Number: 524-529
EPA Receipt Date: 03/11/2025
Action Case Number: 00651619

Dear Ian Murphy:

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

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

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

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

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

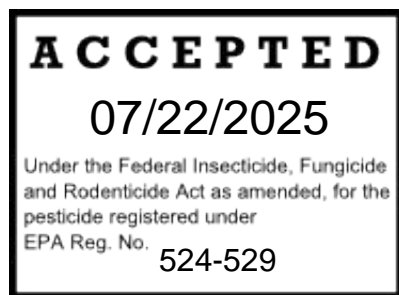
If you have questions, please contact Margaret Golembiewski via email at golembiewski.margaret@epa.gov.

Sincerely,

Kable Bo Davis

Kable Bo Davis, Senior Advisor
HB, RD
Office of Pesticide Programs

MASTER LABEL FOR EPA REG. NO. 524-529



GLYPHOSATE	GROUP	9	HERBICIDE
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[insert PROformance Technology
logo graphic]

Roundup PRO® Concentrate

Herbicide

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

EPA Reg. No. 524-529

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

See [inside/attached] label/booklet for additional Precautions and First Aid.

[Alternates: See label booklet for complete Directions for Use.) /

See attached label [booklet] for complete PRECAUTIONARY LANGUAGE, PERSONAL PROTECTIVE EQUIPMENT, ENVIRONMENTAL HAZARDS, PHYSICAL OR CHEMICAL HAZARDS, AGRICULTURAL USE REQUIREMENTS and LIMIT OF WARRANTY AND LIABILITY.]

Read the entire label before using this product.

Use only according to label instructions.

Not all products listed 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.

[Optional container statements:

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

Alternate Refillable Container Label Statement:

THIS IS AN END-USE PRODUCT. BAYER CROPSOURCE LP DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. IT IS INTENDED THAT REPACKAGING OF THIS PRODUCT FOR DISTRIBUTION OR SALE MAY BE CONDUCTED ONLY UNDER THE TERMS OF A WRITTEN CONTRACT WITH A BAYER CROPSOURCE LP.

Alternate Non-Refillable Container Label Statement:

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

Alternate transport statements:

FOR REPACKAGING INTO ROUNDUP PRO CONCENTRATE HERBICIDE ONLY.
THIS LABEL FOR USE ON TRANSPORT VEHICLES ONLY.]

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1.0 INGREDIENTS

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	50.2%
OTHER INGREDIENTS (including 13% surfactant):	49.8%
	100.0%

*Contains 600 grams per liter or 5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 445 grams per liter or 3.7 pounds per U.S. gallon of the acid glyphosate.

This product is protected by U.S. Patent No. 4,405,531. 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, 1-866-992-2937
2. IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT, OR FOR MEDICAL ASSISTANCE,
CALL COLLECT, DAY OR NIGHT, 1-800-334-7577

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION

Avoid contact with eyes or clothing.

FIRST AID:	
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
<ul style="list-style-type: none"> • Have the product container or label with you when calling a poison control center or doctor, or going for treatment. • You may also contact 1-800-334-7577, collect day or night, for emergency medical treatment information. • This product is identified as Roundup PRO® Concentrate Herbicide, EPA Registration No. 524-529. 	

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)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment (PPE). If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

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

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

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 can be mixed, stored and applied using only stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which 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 Bayer CropScience LP Supplemental Labeling. Supplemental Labeling may be found on the internet at www.agrian.com, www.cdms.net, or www.greenbook.net or obtained by contacting your Authorized Bayer CropScience LP Retailer or Bayer CropScience LP Company representative.

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 (40 CFR Part 170) for agricultural pesticides. 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]

[Optional] See container label for additional CONTAINER DISPOSAL instructions.

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage [and/or] disposal.

PESTICIDE STORAGE: Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container, including rinsate, by application in accordance with label directions. [Alternative: To avoid wastes, empty as much product from this transport vehicle as possible for repackaging or use in accordance with label directions.] If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. [All disposal must be in accordance with applicable Federal, State and local [regulations and] procedures.]

[FOR RIGID PLASTIC 2.5 GAL CONTAINERS OR OTHERS <= 5 GAL]

CONTAINER DISPOSAL:

Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in this container. Contact your state regulatory agency to determine allowable practices in your state.

[Alternate language] **CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container.

CONTAINER HANDLING: Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

[Disposal statement] Once cleaned, some plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or Bayer CropScience LP at 1-866-992-2937. If recycling is not available, puncture and dispose of in a sanitary landfill.

[Alternate disposal statement: Offer container for recycling, if available, or puncture and dispose of in a sanitary landfill.]

[FOR RIGID PLASTIC 30 GAL CONTAINERS OR OTHERS > 5 GAL]

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container.

[Alternate language] Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in this container. Contact your state regulatory agency to determine allowable practices in your state.

CONTAINER HANDLING: Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

[Disposal statement] Once cleaned, some plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or Bayer CropScience LP at 1-866-992-2937. If recycling is not available, puncture and dispose of in a sanitary landfill.

[Alternate disposal statement: Offer container for recycling, if available, or puncture and dispose of in a sanitary landfill.]

[Alternative disposal statement: Then offer this container for recycling, if available. Some container manufacturers offer container recycling. See additional information regarding manufacturer recycling programs attached to this container, if available. If no recycling information is available on this container, contact your chemical dealer or Bayer CropScience LP at 1-866-992-2937 to find the nearest recycling location. If recycling is not available, dispose of this container in accordance with federal, state and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.]

[Optional Container Label Text] Return container to Bayer CropScience LP for recycling. Contact 1-866-992-2937.

[FOR TRANSPORT VEHICLES AS DEFINED IN 40 CFR §156.3]

CONTAINER DISPOSAL: Emptied container retains vapor and product residue. Observe all precautions stated on this label until the container is cleaned, reconditioned or destroyed.

CONTAINER HANDLING: Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, and worn-out threads and closures. Clean thoroughly before reuse for transportation of a material of different composition or before retiring this transport vehicle from service.

[FOR NON-TRANSPORT REFILLABLE CONTAINERS]

CONTAINER DISPOSAL: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

CONTAINER HANDLING: Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean this container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

5.0 GENERAL INFORMATION

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.

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

Mode of Action in Plants: The active ingredient in this product inhibits an enzyme found only in plants that is essential to 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 specified 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 root stocks of perennials will not be affected by the herbicide.

Tank Mixing: This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. 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.

When this label lists a tank mixture with a generic active ingredient including diuron, 2,4-D or dicamba, the user is responsible for ensuring that the mixture product's label allows the specific application.

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 listed in this label. Mixing this product with herbicides or other materials not listed on this label may result in reduced performance.

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, the combined total of all treatments must not exceed 8.5 quarts of this product (8 pounds of glyphosate acid) per acre per year.

ATTENTION

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, 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) which 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 have other unintended consequences.

5.1 Weed Resistance Management

GLYPHOSATE	GROUP	9	HERBICIDE
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For resistance management, Roundup Pro Concentrate is a Group 9 herbicide. Any weed population may contain or develop plants naturally resistant to Roundup Pro Concentrate and other Group 9 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed. To delay herbicide resistance take one or more of the following steps:

- Rotate the use of Roundup Pro Concentrate or other Group 9 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance contact Bayer CropScience at 1-866-99BAYER (1-866-992-2937).

5.2 Management Recommendations for Glyphosate-Resistant Weed Biotypes

NOTE: Appropriate testing is critical in order to confirm weed resistance to glyphosate. Call 1-866-99BAYER (1-866-992-2937) or contact your Bayer CropScience LP representative to determine if resistance in any particular weed biotype has been confirmed in your area or visit www.weedresistancemanagement.com or www.weedscience.org.

Directions for the control of biotypes confirmed to be 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 Bayer CropScience LP representative.

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

Follow good weed management practices to avoid the spread of confirmed resistant biotypes.

6.0 MIXING

Spray solutions of this product should be mixed, stored and applied using only clean stainless steel, fiberglass, plastic or plastic-lined steel containers. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by State or local regulations.

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.

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

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

6.1 Mixing with Water

NOTE: PRODUCT PERFORMANCE MAY BE 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.

This product mixes readily with clean water. Mix spray solutions of this product as follows: Begin filling the mixing tank or spray tank with the required amount of water. Add the labeled 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 foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved 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.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all products involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Always predetermine the compatibility of 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.

When a tank mixture with a generic active ingredient, including 2,4-D, atrazine, dicamba, diuron, or pendimethalin is listed 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-mix.

6.3 Mixing for Hand-held Sprayers

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

Spray Solution

Amount of Roundup PRO Concentrate Herbicide

Desired Volume	0.4%	0.8%	1.2%	1.6%	4.0%	8.0%
1 Gallon	0.5 oz	1.0 oz	1.6 oz	2.1 oz	5.2 oz	10.5 oz
25 Gallons	13.0 oz	0.8 qt	1.2 qt	1.6 qt	4.0 qt	8.0 qt
100 Gallons	1.6 qt	0.8 gal	1.2 gal	1.6 gal	4.0 gal	8.0 gal

2 tablespoons = 1 fluid ounce

For use in backpack, knapsack or pump-up sprayers, it is suggested that the required amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

6.4 Colorants or Dyes

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

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 THE CONDITIONS SPECIFIED WITHIN THIS LABEL.

For aerial broadcast applications, unless otherwise specified, use this product at the rate of 0.8 to 1.6 quarts per acre for annual weeds, 1.6 to 4 quarts per acre for perennial weeds and 4 to 8 quarts per acre for woody brush and trees. Use the labeled rates of this herbicide in 3 to 25 gallons of water per acre. When used according to label directions, this product will give control or partial control of herbaceous weeds, woody brush and trees listed in the **WEEDS CONTROLLED** section of this label.

FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE LIMITATIONS ON AERIAL APPLICATION IN CALIFORNIA ONLY SECTION FOR AERIAL APPLICATIONS OF THIS PRODUCT IN THAT STATE FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS. This product plus dicamba tank mixtures 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.

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.

Avoid direct application to any body of water.

Drift reduction additives may be used. When a drift reduction 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.

PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion. To prevent corrosion of exposed parts, thoroughly wash aircraft after each day of spraying to remove residues of this product accumulated during spraying or from spills. Landing gear are most susceptible.

SPRAY DRIFT MANAGEMENT

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 determines 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 applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed $\frac{3}{4}$ 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 airstream, 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.

Sensitive areas

The pesticide 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).

LIMITATIONS ON AERIAL APPLICATION IN CALIFORNIA ONLY

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 for additional information. Refer to the individual use site section of the product label, or to other supplemental labeling or technical Fact Sheets published separately for this product by BAYER CROPSOURCE LP, for specific use instructions.

AVOID DRIFT - DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH WILL ALLOW 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 any 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 a minimum of 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.
5. **APPLY BY AIR ONLY TO NONRESIDENTIAL AREAS.**

When applied as directed 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.

ADDITIONAL INFORMATION FOR FRESNO COUNTY, CALIFORNIA

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 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.

7.2 Ground Broadcast Equipment

For broadcast ground applications, unless otherwise specified use this product at the rate of 0.8 to 1.6 quarts per acre for annual weeds, 1.6 to 4 quarts per acre for perennial weeds and 4 to 8 quarts per acre for woody brush and trees. When used according to label directions, this product will give control or partial control of herbaceous weeds, woody brush and trees listed in the **WEEDS CONTROLLED** section of this label.

Use the labeled rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the specified 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 for even distribution of spray droplets.

7.3 Backpack or Hand-Held Equipment

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

For control of weeds listed in the **Annual Weeds** section of **WEEDS CONTROLLED**, 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 unless otherwise specified, use a 0.8 percent solution. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds.

For best results, use a 1.6 percent solution on harder-to-control perennials, including Bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

For low volume directed spray applications, use a 4 to 8 percent solution of this product for control or partial control of annual weeds, perennial weeds, or woody brush and trees. 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 applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars after dilution and thorough mixing with water to listed weeds growing in any noncrop site specified on this label.

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

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

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 and sponge bars

A wiper or sponge applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. 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 ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. 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 a wiper applicator.

Do not use wiper equipment when weeds are wet.

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

For Rope or Sponge Wick Applicators: Solutions ranging from 33 to 75 percent of this product in water may be used.

For Porous-Plastic Applicators and Pressure-Feed Systems: Solutions ranging from 33 to 100 percent of this product in water may be used.

When applied as directed, this product **CONTROLS** the following weeds:

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

When applied as directed, 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 instructed.

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 specified in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 15 gallons of water per acre.

CDA equipment produces a spray pattern which 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 INSTRUCTIONS

This product may be used in non-crop areas including airports, apartment complexes, commercial sites, 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, public areas, railroads, rangelands, recreation areas, residential areas, rights-of-way, roadsides, schools, shadehouses, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas and wildlife management areas.

This product may also be used in non-food crop sites including Christmas tree farms, plant nurseries, sod or turf seed farms.

Unless otherwise specified, applications may be made to control any weeds listed in the **WEEDS CONTROLLED** section of this label.

8.1 Cut Stumps

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. 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.

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.

8.2 Forestry [Site Preparation]

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

This product may be used in site preparation prior to planting any tree species, including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites.

For optimum results, use 4.0 – 8.5 quarts of this product per acre. Use higher rates of this product within the specified 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 specified 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 labeled 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.

This product has no herbicidal or residual activity in the soil.

Restrictions: Do not apply this product as an over-the-top broadcast spray for forestry conifer or hardwood release unless otherwise specified on this label.

Conifer Release, Mid-Rotation Conifer Release, and Hardwood Release

Apply this product as a directed spray, with selective equipment, and as an individual plant treatment for woody and herbaceous weeds in conifer plantations and hardwood sites, Christmas tree plantations and

silvicultural nurseries for conifer release or mid-rotation release applications around conifers and hardwoods.

Make applications using application techniques that prevent or minimize direct contact to the foliage of crop trees (including in stands of pine, other conifers, or hardwood). Avoid contact of spray drift, mist or drips with foliage, green bark or non-woody surface roots of desirable plant species. Use directed sprays and ground equipment with nozzles oriented to target only undesirable understory vegetation below the crop tree canopy.

Mid-Rotation Conifer Release and Spot Treatments for Crop Tree Release and Timber Stand Improvement

Apply this product as a ground broadcast or directed spray application for mid-rotation release applications under the canopy of pines, other conifers and hardwoods.

Make applications using application techniques that prevent or minimize direct contact to the foliage of crop trees (including in stands of pine, other conifers, or hardwoods). Use directed sprays and ground equipment with nozzles oriented to target only undesirable understory vegetation below the crop tree canopy. When making spot applications for woody and herbaceous weeds, do not allow spray to contact the foliage of desirable crop trees.

TANK MIXTURES: Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. See **Tank Mixing** section for more information.

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.

For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher labeled rates.

8.3 Non-Crop Areas and Industrial Sites

Use in areas including 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, lumberyards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parks, parking areas, pastures, petroleum tank farms and pumping installations, plant nurseries, railroads, rangeland, recreational areas, residential areas, rights-of-way, roadsides, schools, sod or turf seed farms, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, and wildlife management areas.

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

This product may be used in general non-crop and non-food 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 noncrop 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 provided that the specific product is registered for use on the target site. See **Tank Mixing** section for more information.

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 0.8 to 1.6 quarts of this product plus 2 to 4 ounces of Oust XP (EPA Reg#: 101563-168, Active Ingredient: Sulfometuron) per acre.

Bahiagrass	Dock, curly	Poorjoe
Bermudagrass	Dogfennel	Quackgrass
Broomsedge	Fescue, tall	Vaseygrass
Dallisgrass	Johnsongrass	Vervain, blue

Chemical mowing - Perennials

This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 6.4 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, quackgrass or reed canarygrass covers. Use 5 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 greenup.

Apply 6.4 to 51 fluid ounces of this product per acre. Apply the labeled 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 13 fluid ounces per acre may result in injury or delayed greenup in highly maintained areas, including golf courses and lawns. For further uses, refer to the **Roadsides** section of this label, which gives rates for dormant Bermudagrass and bahiagrass treatments.

Restrictions: DO NOT apply tank mixtures of this product plus Oust XP 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. For further uses, refer to the **Roadsides** section of this label, which gives rates for actively growing Bermudagrass treatments. Use only in areas where some temporary injury or discoloration can be tolerated.

Restrictions: DO NOT apply more than 13 fluid ounces of this product per acre in highly maintained turfgrass areas. DO NOT apply tank mixtures of this product plus Oust XP in highly maintained turfgrass areas.

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 including 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: If application rates total 2.4 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 2.4 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Restrictions: Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques including vertical mowing, coring or slicing should be delayed for 7 days after application to allow translocation into underground plant parts. Do not feed or graze turfgrass grown for seed or sod production for 8 weeks following application.

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 the specified amounts of this product into targeted hollow-stem plants growing in any site specified on this label.

For control of the following hollow-stem plants, follow the use instructions below:

Castorbean, *Ricinus communis*

Inject 4 ml per plant of this product into the lower portion of the main stem.

Hemlock, Poison, *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.

Hogweed, Giant, *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.

Horsetail, Field, *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.

Knotweed, Bohemian, *Polygonum bohemicum*

Inject 5 ml per stem of this product between the second and third internode.

Knotweed, Giant, *Polygonum sachalinense*

Inject 5 ml per stem of this product between second and third internode.

Knotweed, Japanese, *Polygonum cuspidatum*

Inject 5 ml per stem of this product between second and third internode.

Reed, Giant, *Arundo donax*

Inject 6 ml per stem of this product between second and third internode.

Thistle, Canada, *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 removed 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 Foliar or Broadcast Application to Japanese Knotweed and Oriental Bittersweet Japanese Knotweed

For control of Japanese knotweed (*Polygonum cuspidatum*), this product may be applied as a 2.0% v/v spray-to-wet solution. Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment.

For broadcast applications, apply 3.25 quarts of this product in 3 to 40 gallons per acre as a broadcast treatment.

Late summer or fall application is ideal, while leaves are still green and after fruit formation.

Oriental Bittersweet

For control of Oriental bittersweet (*Celastrus orbiculatus*), this product may be applied as a 2.0% v/v spray-to-wet solution. Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment.

For broadcast applications, apply 2.5 quarts of this product in 3 to 40 gallons per acre as a broadcast treatment.

Late summer or fall application is ideal, while leaves are still green and after fruit formation.

8.7 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 which 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 runoff 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 results, application should be made during periods of active growth and after full leaf expansion.

8.8 Ornamentals, Plant Nurseries and Christmas Trees

Post-directed, Trim-and-edge

This product may be used as a post-directed spray around established woody ornamental species including arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, douglas fir, jojoba, hollies, lilac, magnolia, maple, poplar, oak, privet, pine, spruce and yew. This product may also be used to trim-and-edge around trees, buildings, sidewalks and roads, potted plants and other objects in a nursery setting.

Precautions: Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.

Restrictions:

DO NOT USE THIS PRODUCT AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES.

Avoid contact of spray, drift or mist with foliage or bark of established ornamental species.

Site Preparation

This product may be used prior to planting any ornamental, nursery or Christmas tree species.

Wiper Applicators

This product may be used through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established eucalyptus or poplar trees. See the **Selective Equipment** section of this label for further information about the proper use of wiper applicators.

Greenhouse/Shadehouse

This product may 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.

8.9 Parks, Recreational and Residential Areas

This product may be used in parks, recreational and residential 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.

All of the instructions in the **Non-Crop Areas and Industrial Sites** section apply to park and recreational areas.

8.10 Railroads

The instructions in the **Non-Crop Areas and Industrial Sites** section may be used on railroads.

Bare ground, Ballast and Shoulders, Crossings, and 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 for ballast, shoulder, spot, bare ground and crossing treatments. See **Tank Mixing** section for more information.

Brush Control

This product may be used to control woody brush and trees on railroad rights-of-way. Apply 3 to 8 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 0.8 to 1.6 percent solution of this product when using high-volume spray-to-wet applications. Apply a 4 to 8 percent solution of this product when using low volume directed sprays for spot treatment. This product may be mixed for enhanced control of woody brush and trees. See **Tank Mixing** section for more information.

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 13 to 38 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

Apply 6.4 to 51 fluid ounces of this product in a tank mixture with 0.75 to 1.33 ounces of Outrider herbicide (EPA Reg#: 59639-223, Active Ingredient: Sulfosulfuron) per acre. Read and follow all label directions for Outrider herbicide.

This product may be tank mixed with Oust XP. If tank mixed, use no more than 13 to 38 fluid ounces of this product with 1 to 2 ounces of 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 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
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 may cause severe injury.

8.11 Roadsides

The instructions in the **Non-Crop Areas and Industrial Sites** section may apply to 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 objects along the roadside.

Spot Treatment

This product may be used as a spot treatment to control unwanted vegetation growing along roadsides.

TANK MIXTURES: This product may be tank mixed for shoulder, guardrail, spot and bare ground treatments provided that the specific product is registered for use on such sites. See **Tank Mixing** section for more information.

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 greenup. This product may also be tank mixed with Outrider or Oust XP for residual control. Tank mixtures of this product with Oust XP may delay greenup.

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 6.4 to 51 fluid ounces of this product in a tank mixture with 0.75 to 1.33 ounces of Outrider herbicide per acre. Read and follow all label directions for Outrider herbicide.

Apply 6.4 to 51 fluid ounces of this product per acre alone or in a tank mixture with 0.25 to 1 ounce per acre of Oust XP. Apply the labeled 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 greenup and minimize injury, add no more than 1 ounce of Oust XP per acre on Bermudagrass and no more than 0.5 ounce of 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 13 to 38 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:

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 in the Outrider label. Use 6.4 to 26 fluid ounces of this product with 0.75 to 1.33 ounces of Outrider. 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 XP. If tank mixed, use no more than 13 to 26 fluid ounces of this product with 1 to 2 ounces of 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 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 may cause severe injury.

Actively Growing Bahiagrass

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 5 fluid ounces of this product in 10 to 40 gallons of water per acre. Apply 1 to 2 weeks after full greenup or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 1.5 to 3 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 label in actively growing bahiagrass. Apply 5 ounces of this product with 0.75 to 2.0 ounces of Outrider per acre. Use only on well-established bahiagrass.

A tank mixture of this product plus Oust XP may be used. Apply 5 fluid ounces of this product plus 0.5 to 1.0 ounce of Oust XP per acre 1 to 2 weeks following an initial spring mowing. Make only one application per year.

8.12 *Bromus* Species and Medusahead in Pastures and Rangelands

Bromus species:

This product may be used to treat downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*) and cheatgrass (*Bromus secalinus*) found in industrial, rangeland and pasture sites. Apply 6.5 to 13 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 treat medusahead, apply 13 fluid ounces of this product per acre as soon as plants are actively growing, and prior to the 4-leaf stage. Applications may be made in the fall or spring.

Applications to brome and medusahead 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. When applied as directed in this label, there are no grazing restrictions.

8.13 Utility Sites

In utilities, this product may be used along electrical power, pipeline and telephone rights-of-way, and in other sites associated with these rights-of-way, including substations, roadsides, railroads or similar rights-of-way that run in conjunction with utilities.

This product may be used in utility sites 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 may also be used in preparing or establishing wildlife openings within these sites, maintaining access roads and for side trimming along utility rights-of-way.

TANK MIXTURES: Tank mixtures of this product may be used to increase the spectrum of control for herbaceous weeds, woody brush and trees. See **Tank Mixing** section for more information.

For side trimming treatments, use this product alone or in a tank mixture with Garlon 4 (EPA Reg#: 62719-40, Active Ingredient: Triclopyr, butoxyethyl ester).

8.14 Conservation Reserve Program (CRP)

This product may be used to prepare CRP land for crop production. Refer to Federal, state or local use guides for CRP renovation guidance. For any crop not listed for treatment in this label, applications must be made at least 30 days prior to planting.

Renovation (Rotating out of CRP), Site Preparation, Postemergence Weed Control in Dormant CRP Grasses, Over-the-Top Wiper Applications

This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 10 to 13 fluid ounces of this product per acre in early spring before desirable CRP grasses, including 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.

Restrictions: Do not apply more than 2.25 quarts (2 pounds of glyphosate acid) per acre per year onto CRP grasses.

8.15 Grass Seed or Sod Production

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

This product controls most existing vegetation prior to renovating turf or forage grass seed areas or establishing turf grass 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 applications before, during, or after planting or for renovation. 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 spray. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, including 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 4 quarts per acre may be used to totally remove established stands of tough to kill grass species.

Restrictions: Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques including vertical mowing, coring or slicing should be delayed for 7 days after application to allow translocation into underground plant parts.

If application rates total 2.25 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 2.25 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. For any crop not listed for treatment in this label, applications must be made at least 30 days prior to planting. Applications must be made prior to the emergence of the crop to avoid crop injury.

Shielded Sprayers

Apply 26 fluid ounces to 2.4 quarts 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 to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

Over-the-Top Wiper Applications

Applicators should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Weeds should be a minimum of 6 inches above the desirable vegetation. 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 height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. Contact of the herbicide solution with desirable vegetation may result in damage or destruction.

Spot Treatment

Use a 1.0 to 1.6 percent solution. Apply this product prior to heading of grasses grown for seed. The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason. Hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

Creating Rows in Annual Ryegrass

Use 13 to 26 fluid ounces of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

Set nozzle heights to allow the establishment of the desired row spacing while preventing spray droplets, spray fines, or drift to contact the ryegrass plants not treated. Use low-pressure nozzles, or drop nozzles designed to target the application over a narrow band.

Grower assumes all responsibility for crop losses from misapplication.

8.16 Pastures

LABELED GRASSES: Any pasture grass (*Gramineae* family), including bahiagrass, Bermudagrass, bluegrass, brome, fescue, guineagrass, kikuyugrass, orchardgrass, pangola grass, ryegrass, timothy, wheatgrasses.

TYPES OF APPLICATIONS: Spot Treatment, Over-the-Top Wiper Applications, Preplant, Preemergence, Pasture Renovation, Postemergent Broadcast .

Preplant, Preemergence, Pasture Renovation

This product may be applied prior to planting or emergence of forage grasses including bahiagrass, Bermudagrass, bluegrass, brome, fescue, guineagrass, kikuyugrass, orchardgrass, pangola grass, ryegrass, timothy, wheatgrass.

In addition, this product may be used to control perennial pasture species listed on this label prior to replanting.

If application rates total 2.25 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 2.25 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing.

Spot Treatment, Over-the-Top Wiper Applications

This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.

For spot treatments or wiper application methods using rates of 2.25 quarts 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 2.25 quarts 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.

Postemergent Weed Control (Broadcast Treatments)

This product may be used to suppress competitive growth and seed production of annual weeds and undesirable vegetation in pastures. For selective applications with broadcast spray equipment, apply 10 to 13 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. No waiting period is required between application and grazing or harvesting for feed. Use of higher application rates will cause stand reductions. If replanting is needed due to severe stand reduction, applications must be made at least 30 days prior to planting any crop not listed for treatment in this label.

Restrictions: Do not apply more than 2.25 quarts (2 pounds of glyphosate acid) per acre per year onto pasture grasses except for renovation uses (see instructions above).

8.17 Dormant Alfalfa

This product will control or suppress many weeds, including quackgrass, downy brome and cheatgrass in dormant alfalfa.

Apply 7.5 to 9 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 trifoliate leaf expansion of the alfalfa. Applications made after expansion of the first trifoliate leaf of the alfalfa will cause growth reduction and reduced crop yield.

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.

Restrictions: Do not use ammonium sulfate when spraying dormant alfalfa with **Roundup PRO Concentrate**.

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.

Application of this product is limited to persons who have attended a Bayer CropScience LP-approved training program. Application of this product can cause crop injury. Any crop injury is the sole responsibility of the applicator.

8.18 Control of Annual Weeds in Coastal Bermudagrass Pastures

This product may be applied at 13 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 the 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.

Restrictions: 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.

8.19 Broadcast Applications in Christmas Tree Plantations

NOTE: IF IMPROPERLY APPLIED, THIS PRODUCT HAS THE POTENTIAL TO CAUSE SEVERE CHRISTMAS TREE INJURY. FOLLOW ALL LABELED 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 **Roundup PRO Concentrate** 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 26 fluid ounces of this product per acre in 5 to 30 gallons of water per acre.

This product may be used at rates from 26 to 52 fluid ounces per acre in some areas. Consult your local BAYER CROPS SCIENCE LP representative or Roundup supplier for specific recommendations if you require rates greater than 26 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.

Restrictions: DO NOT ADD SURFACTANTS, ADDITIVES CONTAINING SURFACTANTS, OR ANY OTHER ADDITIVES TO THIS PRODUCT OR SEVERE CHRISTMAS TREE INJURY MAY RESULT.

9.0 WEEDS CONTROLLED

Always use the higher rate of this product per acre within the specified 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 labeled rates for the control of annual and perennial weeds and woody brush and trees. For difficult to control 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 8 quarts per acre for enhanced results.

9.1 Annual Weeds

Use 26 fluid ounces per acre if weeds are less than 6 inches in height or runner length and 1.2 to 3.2 quarts 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 that the specific tank mix 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.

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. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or for smaller weeds growing under stressed conditions, use a 0.8 to 1.6 percent solution. Use the higher rate for tough-to-control species or for weeds over 24 inches tall.

WEED SPECIES

Anoda, spurred
Barley*
Barnyardgrass*
Bittercress*
Black nightshade*
Bluegrass, annual*
Bluegrass, bulbous*
Bassia, fivehook
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 manna grass*
Eclipta*
Fall panicum*
Falsedandelion*
False flax, smallseed*
Fiddleneck
Field pennycress*
Filaree
Fleabane, annual*
Fleabane, hairy (*Conyza bonariensis*)*
Fleabane, rough*
Florida pusley
Foxtail*
Goatgrass, jointed*
Goosegrass
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, ladythumb*
 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
 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 13 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 specified range.

Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment. When using hand-held equipment for low volume directed spot treatments, apply a 4 to 8 percent solution of this product.

Allow 7 or more days after application before tillage.

Weed Species	Rate (QT/A)	Hand-Held % Solution
Alfalfa*	0.8	1.6
Alligatorweed*	3.2	1.2
Anise (fennel)	1.6-3.2	0.8-1.6
Bahiagrass	2.4-4	1.6
Beachgrass, European (<i>Ammophila arenaria</i>)	-	4
Bentgrass*	1.2	1.6
Bermudagrass	4	1.6
Bermudagrass, water (knotgrass)	1.2	1.6
Bindweed, field	3.2-4	1.6
Bluegrass, Kentucky	1.6	1.6
Blueweed, Texas	3.2-4	1.6
Brackenfern	2.4-3.2	0.8-1.2
Bromegrass, smooth	1.6	1.6
Bursage, woolly-leaf	--	1.6
Canarygrass, reed	1.6-2.4	1.6
Cattail	2.4-4	1.6
Clover; red, white	2.4-4	1.6
Cogongrass	2.4-4	1.6
Dallisgrass	2.4-4	1.6
Dandelion	2.4-4	1.6
Dock, curly	2.4-4	1.6
Dogbane, hemp	3.2	1.6
Fescue (except tall)	2.4-4	1.6
Fescue, tall	0.8-2.4	1.6
German ivy	1.6-3.2	0.8-1.6
Guineagrass	2.4	0.8
Horsenettle	2.4-4	1.6
Horseradish	3.2	1.6
Iceplant	1.6	1.2-1.6
Jerusalem artichoke	2.4-4	1.6
Johnsongrass	1.6-2.4	0.8
Kikuyugrass	1.6-2.4	1.6
Knapweed	3.2	1.6
Lantana	--	0.8-1
Lespedeza	2.4-4	1.6
Milkweed, common	2.4	1.6
Muhly, wirestem	1.6	1.6
Mullein, common	2.4-4	1.6
Napiergrass	2.4-4	1.6
Nightshade, silverleaf	1.6	1.6
Nutsedge; purple, yellow	2.4	0.8-1.6
Orchardgrass	1.6	1.6
Pampasgrass	2.4-4	1.2-1.6
Paragrass	2.4-4	1.6
Pepperweed, perennial	3.2	1.6
Phragmites*	2.4-4	0.8-1.6
Poison hemlock	1.6-3.2	0.8-1.6
Quackgrass	1.6-2.4	1.6
Redvine*	1.6	1.6
Reed, giant	3.2-4	1.6
Ryegrass, perennial	1.6-2.4	0.8
Smartweed, swamp	2.4-4	1.6

Spurge, leafy*	--	1.6
Sweet potato, wild*	--	1.6
Thistle, artichoke	1.6-2.4	0.8-1.6
Thistle, Canada	1.6-2.4	1.6
Timothy	1.6-2.4	1.6
Torpedograss*	3.2-4	1.6
Trumpetcreeper*	1.6-2.4	1.6
Vaseygrass	2.4-4	1.6
Velvetgrass	2.4-4	1.6
Wheatgrass, western	1.6-2.4	1.6

*Partial control

9.3 Woody Brush and Trees

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.

Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment. When using hand-held equipment for low volume directed-spray spot treatments, apply a 4 to 8 percent solution of this product.

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	2.4-3.2	0.8-1.2
Ash*	1.6-4	0.8-1.6
Aspen, quaking	1.6-2.4	0.8-1.2
Bearclover (Bearmat)*	1.6-4	0.8-1.6
Beech*	1.6-4	0.8-1.6
Birch	1.6	0.8
Blackberry	2.4-3.2	0.8-1.2
Blackgum	1.6-4	0.8-1.6
Bracken	1.6-4	0.8-1.6
Broom; French, Scotch	1.6-4	1.2-1.6
Buckwheat, California*	1.6-3.2	0.8-1.6
Cascara*	1.6-4	0.8-1.6
Catsclaw*	--	0.8-1.2
Ceanothus*	1.6-4	0.8-1.6
Chamise*	1.6-4	0.8
Cherry; bitter, black, pin	1.6-2.4	0.8-1.2
Coyote brush	2.4-3.2	1.2-1.6
Deerweed	1.6-4	0.8
Dogwood*	1.6-4	0.8-1.6
Elderberry	1.6	0.8
Elm*	1.6-4	0.8-1.6
Eucalyptus	--	1.6
Gorse*	1.6-4	0.8-1.6
Hasardia*	1.6-3.2	0.8-1.6
Hawthorn	1.6-2.4	0.8-1.2
Hazel	1.6	0.8

Hickory*	1.6-4	0.8-1.6
Honeysuckle	2.4-3.2	0.8-1.2
Hornbeam, American*	1.6-4	0.8-1.6
Kudzu	3.2	1.6
Locust, black*	1.6-3.2	0.8-1.6
Madrone resprouts*	--	1.6
Manzanita*	1.6-4	0.8-1.6
Maple, red	1.6-3.2	0.8-1.2
Maple, sugar	--	0.8-1.2
Monkey flower*	1.6-3.2	0.8-1.6
Oak; black, white*	1.6-3.2	0.8-1.6
Oak, post	2.4-3.2	0.8-1.2
Oak; northern, pin	1.6-3.2	0.8-1.2
Oak, Scrub*	1.6-3.2	0.8-1.2
Oak; southern red	1.6-2.4	0.8-1.2
Peppertree, Brazilian (Florida holly)*	1.6-4	0.8-1.6
Persimmon*	1.6-4	0.8-1.6
Pine	1.6-4	0.8-1.6
Poison ivy	3.2-4	1.6
Poison oak	3.2-4	1.6
Poplar, yellow*	1.6-4	0.8-1.6
Redbud, eastern	1.6-4	0.8-1.6
Rose, multiflora	1.6	0.8
Russian olive*	1.6-4	0.8-1.6
Sage, black	1.6-3.2	0.8
Sage, white*	1.6-3.2	0.8-1.6
Sage brush, California	1.6-3.2	0.8
Salmonberry	1.6	0.8
Saltcedar*	1.6-4	0.8-1.6
Sassafras*	1.6-4	0.8-1.6
Sourwood*	1.6-4	0.8-1.6
Sumac; laurel, poison, smooth, sugarbush, winged*	1.6-3.2	0.8-1.6
Sweetgum	1.6-2.4	0.8-1.2
Swordfern*	1.6-4	0.8-1.6
Tallowtree, Chinese	--	0.8
Tan oak resprouts*	--	1.6
Thimbleberry	1.6	0.8
Tobacco, tree*	1.6-3.2	0.8-1.6
Toyon*	-	1.6
Trumpet creeper	1.6-2.4	0.8-1.2
Vine maple*	1.6-4	0.8-1.6
Virginia creeper	1.6-4	0.8-1.6
Waxmyrtle, southern*	1.6-4	0.8-1.6
Willow	2.4	0.8
Yerbasanta*	-	1.6

*Partial control

10.0 LIMIT OF WARRANTY AND LIABILITY

Bayer CropScience LP 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. 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.

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Roundup PRO® Concentrate Herbicide (PENDING) 03/03/2025, 03/10/2025, 07/11/2025, 07/14/2025, 07/21/2025

Appendix 1: Marketing Claims and Graphics

Graphics are representative examples of what could be used in the marketed label. Changes to the exact color, shape, size, orientation may occur.

PROformance Technology

