# PLEASE NOTE

This image contains more than one label approved for this product on this date.

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460



AND

OFFICE OF PREVENTION, PESTICIDES

TOXIC SUBSTANCES

MAR -8 2006

Ms. Dawn Fee-White Monsanto Company 1300 I (Eye) Street, NW, Suite 450 East Washington, DC 20005

Dear Ms. Dawn Fee-White:

Subject: Roundup Pro Concentrate Herbicide (Supplemental for Tank-Mixes In Non-Crop

Areas)

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EPA Registration No. 524-529

Application Dated December 22, 2005

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable, provided you make the following change before you release the product for shipment.

--Delete the phrase "and similar sites" and replace with a specific list of use sites.--

Submit one (1) copy of your final printed labeling incorporating the above change before you release the product for shipment. A stamped copy of labeling is enclosed for your records.

Supplemental labeling must be incorporated into a master label and copies of master labeling submitted to the Agency for our files at your next printing or within two years from the date of acceptance of supplemental labeling, whichever comes first. The Agency will consider a convincing argument as to why a supplemental label should not appear on a master label on a case by case basis.

Sincerely,

July (Constant)

James A. Tompkins

Product Manager 25

Herbicide Branch

Registration Division (7505C)

## SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup PRO Concentrate as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

## ROUNDUP PRO® CONCENTRATE

Herbicide

TANK MIXTURES FOR NON-CROP AREAS, INCLUDING RAILROAD RIGHTS-OF-WAY, SUBSTATIONS, AIRPORTS, INDUSTRIAL PLANTS, ROADSIDES, ACCEPTED AREAS AND SIMILAR SITES

In EPA Letter Dated:

MAR - 8 2006

EPA Reg. No. 524-529

Keep out of reach of children.

## **CAUTION!**

Under the Federal Insectivities, Fungicide, and Rodenticide Ass, as amended, for the pessicide registered under EPA Reg. No.

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

Roundup PRO is a registered trademark of Monsanto Technology LLC.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

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

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for Roundup PRO Concentrate for essential product performance information.

Do not allow spray mixtures of this herbicide to mist, drip, drift or splash onto desirable vegetation since injury or destruction may occur. Do not apply when wind or other conditions favor drift.

See the "WEEDS CONTROLLED" section of the Roundup PRO Concentrate label booklet for rate recommendations. For tough-to-control species, where dense stands occur, or where conditions for control are not ideal, up to 3.2 quarts per acre of this product may be use on annual weeds and up to 4 quarts per acre of this product may be used on perennial weeds for improved results.

#### TANK MIXTURES

This product provides control of the emerged weeds listed in the label booklet. When, applied as a tank mixture, the following herbicides will provide preemergence and/or postemergence control of the weeds listed in the individual product labels:

This product may be tank mixed with the following products provided that the specific product is registered for use on the target site. Refer to these product labels for approved sites and application rates. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive precautionary statements for each product in the mixture.

2.4-D1 Arsenal atrazine1 Barricade 65WG Crossbow L dicamba1 diuron<sup>1</sup> Endurance **Escort Escort XP** Gallery 75 DF Garlon 3A Garlon 4 Goal 2XL Hyvar X Hvvar X-L Krenite Krovar I DF Landmark II MP Landmark MP Landmark XP

Milestone Oust **Oust XP** Outrider Overdrive pendimethalin1 Plateau Plateau DG Poast Quicksilver Ronstar 50 WSP Sahara DG simazine<sup>1</sup> Spike 80DF Surflan AS Surflan WDG Telar DF Transline Velpar DF Velpar L

Maintain good agitation at all times during the mixing process. Ensure that the tank-mix products are well mixed with the spray solution before adding this product.

Mix only the quantity of spray solution that can be used during the same day. Tank mixtures allowed to stand overnight may result in reduced weed control.

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

When used in combination as recommended by Monsanto Company, the liability of Monsanto shall in no manner extend to any damage, loss or injury not solely and directly caused by the inclusion of the Monsanto product in such combination use.

Read "LIMIT OF WARRANTY AND LIABILITY" in the label booklet for Roundup PRO Concentrate before using this product. Those terms apply to this supplemental labeling and, if those terms are not acceptable, return the product unopened at once.

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

# NEXT

# LABEL



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES

**TOXIC SUBSTANCES** 

ΔND

MAR - 8 2005

Ms. Dawn Fee-White Monsanto Company 1300 I (Eye) Street, NW, Suite 450 East Washington, DC 20005

Dear Ms. Dawn Fee-White:

Subject: Roundup Pro Concentrate Herbicide (Revise Master Label)

EPA Registration No. 524-529

Application Dated December 15, 2005

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable, provided you make the following changes before you release the product for shipment.

- 1. On page 28, in your Limit of Warranty and Liability, revise the last sentence of the third paragraph to read "To the fullest extent permitted by law, buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this company..."
- 2. On page 28, in your Limit of Warranty and Liability, revise the last sentence of the fifth paragraph to read "To the fullest extent permitted by law, in no event shall this company or any other seller be liable for any incidental, consequential, or special damages."

Submit one (1) copy of your final printed labeling incorporating the above change before you release the product for shipment. Amended labeling supercedes all previously accepted ones. A stamped copy of labeling is enclosed for your records.

Sincerely,

Vickie k Walks for James A. Tompkins Product Manager 25 Herbicide Branch Registration Division (7505C)

## **MASTER LABEL FOR EPA REG. NO. 524-529**

Registered Brand Names:

## Roundup PRO® Concentrate Herbicide

Table of Contents for Master Label

- 1. MAIN LABEL FOR INDUSTRIAL, TURF AND ORNAMENTAL USES
- II. Supplemental labels
  - A.For Use in Dormant Alfalfa
  - B.For the Control of Annual Weed in Coastal Bermudagrass Pastures Prior to Spring Growth or Immediately after First Cutting.
  - C.Addition of Surfactant for Applications with Roundup PRO Concentrate
  - D.Addition of Surfactant for Applications with Roundup PRO Concentrate (Alternate version)
  - E.Broadcast Applications in Christmas Tree Plantations
  - F. Tank Mixtures for Improved Control of Bengrass (Agrostis spp.)
  - G. For Aerial Application in California only

#### I. Main Label for Industrial, Turf and Ornamental Uses

[insert PROFormance Technology logo graphic]

#### Roundup® PRO Concentrate

Herbicide by Monsanto

The complete broadspectrum postemergence professional herbicide for industrial, turf and ornamental weed control.

## **Complete Directions for Use**

EPA Reg. No. 524-529

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

Read the entire label before using this product.

Use only according to label instructions.

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

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

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

#### Refillable Container Label Statement:

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

Non-Refillable Container Label Statement:

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

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  - 3.2 Environmental Hazards
  - 3.3 Physical or Chemical Hazards
- 4 4.0 STORAGE AND DISPOSAL
- 5 5.0 GENERAL INFORMATION (How This Product Works)
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  - 6.2 Tank Mixing Procedure
  - 6.3 Mixing for Hand-Held Sprayers
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10.0 LIMIT OF WARRANTY AND LIABILITY

10

#### 1.0 INGREDIENTS

**ACTIVE INGREDIENT:** 

| *Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt | 50.2%        |
|---|--------------|
| OTHER INGREDIENTS (including 13% surfactant):                                   | <u>49.8%</u> |
| 1   | 00.0%        |

<sup>\*</sup>Contains 600 grams per litre or 5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt.

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

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

1-800-332-3111

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

(314)-694-4000

#### 3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

## CAUTION!

CAUSES MODERATE EYE IRRITATION

Avoid contact with eyes or clothing.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAR -8 2006

Inder the Federal Insecticite, fungicide, and Rodenticide het, to amended, for the pecticide registered under EPA lieg. No.

FIRST AID: Call a poison control center or doctor for treatment advise.

#### IF IN EYES:

- 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.
- Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
- You may also contact (314) 694-4000, 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

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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 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

#### 3.2 Environmental Hazards

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

#### 3.3 Physical or Chemical Hazards

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

DO NOT MIX. STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling, Supplemental Labeling may be found on the cdms.net or greenbook net websites or obtained by contacting your Authorized Monsanto Retailer or Monsanto 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

**PESTICIDE STORAGE**: Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Keep container closed to prevent spills and contamination.

**PESTICIDE DISPOSAL**: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

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

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

#### FOR PLASTIC ONE-WAY CONTAINERS & BOTTLES

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

#### FOR ONE-WAY DRUMS

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

FOR METAL CONTAINERS (non-aerosol)

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

## FOR REFILLABLE PORTABLE (MINI-BULK) CONTAINERS

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

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

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

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

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

#### FOR REFILLABLE STATIONARY BULK CONTAINERS

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

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

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

#### 5.9 GENERAL INFORMATION

(How This Product Works)

Product Description: This product is a postemergent, 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 recommended stage for treatment.

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

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or 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 recommends a tank mixture with a generic active ingredient such as 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 recommended in this label. Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance.

Annual Maximum Use Rate: The combined total of all treatments must not exceed 8.5 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rates.

#### **ATTENTION**

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

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

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) 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 other unintended consequences. 5.1 Weed Resistance Management

| GROUP | 9 | HERBICIDE |
|-------|---|-----------|
| i     |   |           |

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

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

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

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

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

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

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

#### 6.0 MIXING

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

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

## More Concentrated

Use the following conversion table to help determine application rates of Roundup PRO Concentrate Herbicide based on commonly used rates of Roundup PRO Herbicide:

|   | Roundup PRO<br>Concentrate | Roundup PRO<br>(Ounces) | Roundup PRO<br>(Pints) |
|---|----------------------------|-------------------------|------------------------|
|   | (Ounces)                   | 24                      | 1.5                    |
| 1 | 26                         | 32                      | 2                      |

| 20  | 40 | 25  |
|-----|----|-----|
| JZ  | 40 | 2.0 |
| L ! |    |     |

#### 6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the recommended amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. 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 Procedure

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

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

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

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

Refer to the "Tank Mixing" section of "GENERAL INFORMATION" for additional precautions.

## 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

|             | 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 recommended amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

#### 6.4 Colorants or Dyes

Agriculturally-approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilution. Use colorants or dyes according to the manufacturer's recommendations.

#### 7.0 APPLICATION EQUIPMENT AND TECHNIQUES

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

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

#### 7.1 Aerial Equipment

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

For aerial 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 recommended 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 FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS. This product plus dicamba tank mixtures may not be applied by air in California.

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**

- 1. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

#### Importance of droplet size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see the **Wind**, **Temperature and Humidity**, and **Temperature Inversion** sections of this label).

#### Controlling droplet size

- Volume: Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- Pressure: Use the lower spray pressures recommended for the nozzle. Higher pressure reduces
  droplet size and does not improve canopy penetration. When higher flow rates are needed, use
  higher flow rate nozzles instead of increasing pressure.
- Number of nozzles: Use the minimum number of nozzles that provide uniform coverage.
- Nozzle orientation: Orienting nozzles so that the spray is released backwards, parallel to the 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.

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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).

#### 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 recommended 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 recommended range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat-fan nozzles. Check 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, such as Bermudagrass, dock, field binaweed, hemp dogbane, milkweed and Canada thistle.

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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 recommended, this product CONTROLS the following weeds:

Corn, volunteer Panicum, Texas

Sicklepod Spanishneedles Starbur, bristly

Rye, common Shattercane



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

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

Pigweed, redroot

#### 7.5 Injection Systems

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

#### 7.6 CDA Equipment

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

Detailed instructions follow alphabetically, by site.

Unless otherwise specified, applications may be made to control any weeds listed in the 'WEEDS CONTROLLED" section of this label. Refer also to the "Selective Equipment" section.

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

Alder Saltcedar
Eucalyptus Sweetgum
Madrone Tan oak
Oak Willow
Reed, giant

DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

## 8.2 Forestry Site Preparation

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

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

Refer to the "WEEDS CONTROLLED" section of this label for specific application rates and instructions. Use higher rates of this product within the recommended range for control or partial control of woody brush trees and hard-to-control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Increase rates within

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the recommended range for control of perennial herbaceous weeds any time after emergence and before seedheads, flowers or berries appear.

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

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

Unless otherwise directed, do not apply this product as an over-the-top broadcast spray for forestry confer or hardwood release.

TANK MIXTURES: Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. This product may be tank mixed with the following products provided that the specific product is registered for use on the target site. Refer to these product labels for approved sites and application rates. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive precautionary statements for each product in the mixture.

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

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

Arsenal Applicators Concentrate Garlon 3A
Chopper Garlon 4
Escort Oust
Escort XP Oust XP

#### 8.3 General Noncrop Areas and Industrial Sites

Use in areas such as airports, apartment complexes, Christmas tree farms, commercial sites, Conservation Reserve Program (CRP) areas, ditch banks, driveways, dry ditches, dry canals, fencerows, golf courses, greenhouses, industrial sites, landscape areas, lumberyards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parks, parking areas, pastures, petroleum tank farms and pumping installations, plant nurseries, public areas, railroads, rangeland, 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 noncrop 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 with the following products provided that the specific product is registered for use on the target site. Refer to these product labels for approved sites and application rates. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive precautionary statements for each product in the mixture.

User is responsible for ensuring that the mixture product's label allows the specific applications when tank mixing with a generic active ingredient listed below.

2.4-D Arsenal atrazine 1 Banvel Barricade 65WG dicamba diuron Endurance Escort Escort XP Gallery 75 DF Garlon 3A Krovar I DF Garlon 4 Goal 2XL Oust Oust XP Outrider Plateau Ronstar 50 WP pendimethalin 1 Surflan WDG simazine 1 Surflan AS



Telar DF

Transline

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 or Oust XP 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 recommended rates in 10 to 40 gallons of water per acre. Use only in areas where Bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated.

Treatments in excess of 13 fluid ounces per acre may result in injury or delayed greenup in highly maintained areas, such as golf courses and lawns. DO NOT apply tank mixtures of this product plus Oust or Oust XP in highly maintained turfgrass areas. For further uses, refer to the "Roadsides" section of this label, which gives rates for dormant Bermudagrass and bahiagrass treatments.

#### **Actively Growing Bermudagrass**

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. DO NOT apply more than 13 fluid ounces of this product per acre in highly maintained turfgrass areas. DO NOT apply tank mixtures of this product plus Oust or Oust XP in highly maintained turfgrass areas. 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.

## Turfgrass Renovation, Seed, or Sod Production

This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses such as Bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.

Desirable turfgrasses may be planted following the above procedures.

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

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

PRECAUTIONS; RESTRICTIONS: Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow translocation into underground plant parts. If application rates total 2.4 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.

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 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. This product will control many species, some of which are listed below:

ControlPartial ControlOakBlack gumPoplarDogwoodSweetgumHickorySycamoreMaple, red

## 8.6 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 such as 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.

Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES. Care must be exercised to avoid contact of spray, drift or mist with foliage or green 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 undestrable vegetation around established eucalyptus or poplar tees. 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.

#### 8.7 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 "General Noncrop Areas and Industrial Sites" section apply to park and recreational areas.

#### 8.8 Railroads

The instructions in the "General Noncrop 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 with the following products for ballast, shoulder, spot, bare ground and crossing treatments provided that the specific product is registered for use on such sites. Refer to these product labels for approved noncrop 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.

User is responsible for ensuring that the mixture product's label allows the specific applications when tank mixing with a generic active ingredient listed below.

| Arsenal     | atrazine <sup>1</sup> | dicamba <sup>1</sup>  |
|-------------|-----------------------|-----------------------|
| Escort      | Escort XP             | Garlon 3A             |
| Garlon 4    | Hyvar X               | Hyvar X-L             |
| Krovar I DF | Oust                  | Oust XP               |
| Outrider    | Sahara DG             | simazine <sup>1</sup> |
| Spike 80DF  | Telar DF              | Transline             |
| Velpar DF   | Velpar L              | 2,4-D <sup>1</sup>    |

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

#### **Brush Control**

This product may be used to control woody brush and trees on railroad rights-of-way. Apply 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 with the following products for enhanced control of woody brush and trees:

| Arsenal                         | Escort                  | Escort XP             |
|---------------------------------|-------------------------|-----------------------|
| Garlon 3A                       | Garlon 4                | Telar DF              |
| Krenite<br>Tordon K<br>Vanguish | Tordon 22K<br>Velpar DF | Transline<br>Velpar L |

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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 per acre. Read and follow all label directions for Outrider herbicide.

This product may be tank mixed with Oust. If tank mixed, use no more than 13 to 38 fluid ounces of this product with 1 to 2 ounces of Oust 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 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 are not recommended, since severe injury may occur.

#### 8.9 Roadsides

The instructions in the "General Noncrop 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 with the following products for shoulder, guardrail, spot and bare ground treatments provided that the specific product is registered for use on such sites. Refer to these product labels for approved noncrop sites and application rates. Read and carefully observe 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.

User is responsible for ensuring that the mixture product's label allows the specific applications when tank mixing with a generic active ingredient listed below.

atrazine 1 Landmark II MP **Poast** Crossbow L Landmark MP Ronstar 50 WSP dicamba Landmark XP Sahara DF diuron simazine Oust Escort Surflan AS Oust XP Escort XP Surflan WDG Outrider pendimethalin 1 Endurance Telar DF Gallery 75 DF Plateau Velpar DF Velpar L Krova I DF Plateau DG

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## 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, Oust or Oust XP for residual control. Tank mixtures of this product with Oust or 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 or Oust XP. Apply the recommended rates in 10 to 40 gallons of water per acre. Use only in areas where Bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. To avoid delays in greenup and minimize injury, add no more than 1 ounce of Oust or Oust XP per acre on Bermudagrass and no more than 0.5 ounce of Oust or Oust XP per acre on bahiagrass and avoid treatments when these grasses are in a semi-dormant condition.

#### **Actively Growing Bermudagrass**

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. Apply 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 tabel. 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 or Oust XP. If tank mixed, use no more than 13 to 26 fluid ounces of this product with 1 to 2 ounces of Oust or Oust XP per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust or Oust XP label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass Fescue, tall
Bluestem, silver Johnsongrass
Broomsedge Poorjoe
Dallisgrass Trumpetcreeper
Dock, curly Vaseygrass
Dogfennel Vervain, blue

Use only on well-established Bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season are not recommended, since severe injury may occur.

#### **Actively Growing Bahlagrass**

For sucpression 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.

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

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

## 8.10 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.

#### 8.11 Utility Sites

In utilities, this product is recommended for use along electrical power, pipeline and telephone rights-of-way, and in other sites associated with these rights-of-way, such as substations, roadsides, railroads or similar rights-of-way that run in conjunction with utilities.

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

TANK MIXTURES: Tank mixtures of this product may be used to increase the spectrum of control for herbaceous weeds, woody brush and trees This product may be tank mixed with the following products. Refer to these products' labels for approved noncrop sites and application rates. Read and carefully observe 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.

User is responsible for ensuring that the mixture product's label allows the specific applications when tank mixing with a generic active ingredient listed below.

| Arsenal.    | atrazine <sup>1</sup>      | dicamba <sup>1</sup>  |
|-------------|----------------------------|-----------------------|
| diuron¹     | Endurance <sup>tM</sup>    | Escort                |
| Escort XP   | Garlon 3A                  | Garlon 4 <sup>2</sup> |
| Krovar I DF | Oust                       | Oust XP               |
| Outrider    | pendimethalin <sup>1</sup> | Plateau™              |
| Sahara™     | simazine <sup>1</sup>      | Surflan AS            |
| Surflan WDG | Telar DF                   | Transline             |
| Vanquish™   | Velpar DF                  | Velpar L              |



2,4-D<sup>1</sup> Krenite

## 8.12 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 recommendations. 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, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant. No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 2.25 quarts per acre per year onto CRP grasses.

#### 8.13 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, such as Bermudagrass, summer or fall applications provide best control. Broadcast equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. Application rates up to 4 quarts per acre may be used to totally remove established stands of tough to kill grass species.

Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts. If application rates total 2.25 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

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

<sup>&</sup>lt;sup>2</sup> For side trimming treatments, it is recommended that this product be used alone or in tank mixture with Garlon 4.



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 tail. 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 of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended.

#### Grower assumes all responsibility for crop losses from misapplication.

#### 8.14 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 field 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. Do not apply more than 2.25 quarts per acre per year onto pasture grasses except for renovation uses (see instructions above). 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.



#### 9.0 WEEDS CONTROLLED

Always use the higher rate of this product per acre within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (noncultivated) area.

Reduced results may occur when treating weeds heavily covered with dust. For weeds that have been moved, grazed or cut, allow regrowth to occur prior to treatment.

Refer to the following label sections for recommended rates for the control of annual and perennial weeds and woody brush and trees. For difficult to control 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.

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 .8 to 1.6 percent solution. Use the higher rate for tough-to-control species or for weeds over 24 inches tall.

#### **WEED SPECIES**

Annoda, 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\*

Dwarfdandelion\*

Eastern mannagrass\*

Eclipta\*

Fall panicum\*

Falsedandelion\*

Falseflax, smallseed\*

Fiddleneck

Field pennycress\*

Filaree

Fleabane annual\*

Fleabane. hairy (Conyza bonariensis)\*

Fleabane. rough\*

Florida pusley

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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

Rve\*

Ryegrass\*

Sandbur, field\*

Shattercane\*

Shepherd's-purse\*

Sicklepod

Signalgrass, broadleaf\*

Smartweed, ladysthumb\*

Smartweed, Pennsylvania\*

Sowthistle, annual

Spanishneedles

Speedwell, purslane\*

Sprangletop\*

Spurge, annual

Spurge, prostrate\*

Spurge, spotted\*

Spurry, umbrella\*

Starthistle, yellow

Stinkgrass\*

Sunflower\*

Teaweed/ Prickly sida

Texas panicum\*

Velvetleaf

Virginia copperleaf

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 recommended 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    | Hand-Held  |
|---|---------|------------|
|   | (QT/A)  | % 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 (Ammophila arenaria) | -       | 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                      | <b></b> | 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        |

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| 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     |

<sup>\*</sup>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<br>(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                                      | 1       | 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     |
| Trumpetcreeper                                    | 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     |   |
| Yerbasenta*          |       | 1.6     |   |

<sup>\*</sup>Partial control

## **10.0 LIMIT OF WARRANTY AND LIABILITY**

Monsanto Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. 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.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

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

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

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

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

Certainty, Outrider and Roundup PRO are registered trademarks of Monsanto Technology, LLC All other trademarks are the property of their respective owners.

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).

EPA Reg. No. 524-529

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

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ST. LOUIS. MISSOURI, 63167 U.S.A.

# 30/37

#### II. Supplemental Labels

EPA Reg. No. 524-529

## SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR ROUNDUP PRO CONCENTRATE HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup PRO Concentrate herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

## ROUNDUP PRO CONCENTRATE

## Herbicide

Keep out of reach of children.

| CAUTION!   |  |  |  |  |
|--|--|--|--|--|
| In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.          |  |  |  |  |
| DIRECTIONS FOR USE   |  |  |  |  |
| It is a violation of Federal law to use this product in any manner inconsistent with its labeling. |  |  |  |  |

This labeling must be in the possession of the user at the time of herbicide application.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH FOLIAGE,

GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for Roundup PRO Concentrate herbicide for essential product performance information.

TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

## [INSERT SPECIFIC USE DIRECTIONS FROM FOLLOWING SECTIONS HERE]

Read the "Limit of Warranty and Liability" in the label booklet for Roundup PRO Concentrate herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

\_ \_\_\_\_\_ © [DATE MONSANTO COMPANY ST. LOUIS, MISSOURI 63167

Roundup PRO Concentrate is a trademark of Monsanto Technology LLC.



#### A. FOR USE IN DORMANT ALFALFA

#### RECOMMENDATIONS

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.

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.

Slight discoloration of the alfalfa may occur, but the alfalfa will regreen and regrow under moist soil conditions as effects of this product wear off.

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

# B. FOR THE CONTROL OF ANNUAL WEEDS IN COASTAL BERMUDAGRASS PASTURES PRIOR TO SPRING GROWTH OR IMMEDIATELY AFTER FIRST CUTTING

#### RECOMMENDATIONS

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 Henbit Sandbur, field Sunflower

Johnsongrass, seedling

Wheat

Little barley

Wild mustard

#### TIMING OF APPLICATION

<u>Applications prior to spring growth:</u> 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.

NOTE: ONLY ONE APPLICATION PER YEAR MAY BE MADE TO ANY ONE FIELD. A SPRING APPLICATION PRIOR TO GROWTH AND AN APPLICATION FOLLOWING THE FIRST CUTTING MAY NOT BE MADE ON THE FIELD DURING THE SAME YEAR.



## C. ADDITION OF SURFACTANT FOR APPLICATIONS WITH Roundup PRO Concentrate

Although not generally required, surfactant may be added to spray solutions at water carrier volumes above 30 gallons per acre or application rates below 20 fluid ounces of this product per acre.

Nonionic surfactants which are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactant, a rate of 0.25 to 0.5 percent surfactant concentration (1 to 2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 70 percent active ingredient or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70 percent active ingredient is recommended. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

When applied as recommended under the conditions described, this product controls annual and perennial weeds listed in the label booklet.

# D. ADDITION OF SURFACTANT FOR APPLICATIONS WITH Roundup PRO Concentrate (Alternate version)

The addition of surfactant to spray solutions of this product is generally not required for the control of annual and perennial weeds listed in the label booklet. Under certain circumstances such as when water carrier volumes are above 30 gallons per acre or the product use rate is less than 20 fluid ounces per acre, the addition of additional surfactant may improve weed control.

When surfactant is added, only nonionic surfactants which are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactant, a rate of 0.25 to 0.50 percent surfactant concentration (1 to 2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 70 percent active ingredient or a 0.50 to 1 percent surfactant concentration (2 to 4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70 percent active ingredient is recommended. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

#### E. 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.



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

This product may be used at rates from 26 to 52 fluid ounces per acre in some areas. Consult your local Monsanto 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.

## F. TANK MIXTURES FOR IMPROVED CONTROL OF BENTGRASS (Agrostis spp.)

Roundup PRO Concentrate herbicide may be tank mixed with the products listed below for improved control of bentgrass (*Agrostis* spp.). When tank mixing, read and carefully observe label directions, cautionary statements and all information on the labels of each product used. Refer to each individual product label for approved use sites.

ENVOY® FUSILADE® II FUSION® VANTAGE®

Dry ammonium sulfate, at 1 to 2 percent by weight, may be added to the spray solution for the above applications. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

#### **Broadcast Treatment**

- Apply 1.6 to 3.2 quarts per acre of this product plus 34 fluid ounces per acre of Envoy in 20 to 40 gallons per acre of spray solution.
- Apply 1.6 to 3.2 quarts per acre of this product plus 24 fluid ounces per acre of Fusilade II in 20 to 40 gallons per acre of spray solution.
- Apply 1.6 to 3.2 quarts per acre of this product plus 60 fluid ounces per acre of Vantage in 20 to 40 gallons per acre of spray solution.
- Apply 1.6 to 3.2 quarts per acre of this product plus 9 fluid ounces per acre of Fusion in 20 to 40 gallons per acre of spray solution.

Re-treatment may be needed in the event of incomplete control.

#### **Spot Treatment**

- Mix 2.13 fluid ounces of this product with 1.3 fluid ounces of Envoy in one gallon of water and spray-to-wet.
- Mix 2.13 fluid ounces of this product with 0.75 fluid ounces of Fusilade II in one gallon of water and spray-to-wet.
- Mix 2.13 fluid ounces of this product with 3 fluid ounces of Vantage in one gallon of water and spray-to-wet.
- Mix 2.13 fluid ounces of this product with 0.25 fluid ounces of Fusion in one gallon of water and spray-to-wet.



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

#### G. FOR AERIAL APPLICATION IN CALIFORNIA ONLY

When applied as recommended under the conditions described, this product controls annual and perennial weeds and woody brush and trees listed in the label booklet. See the **Site and Use**Recommendations and **Weeds Controlled** sections of the label booklet for rate recommendations.

Aerial applications of this product are allowed in the following situations:

- 1. Prior to the emergence or transplanting of labeled crops
- 2. Aid to burning for establishment and maintenance of fuel breaks
- 3. Establishing fire perimeters and black lines
- 4. Aid to prescribed burning
- 5. Along fire roads
- 6. Range conversion
- 7. Habitat restoration and management
- 8. Wildlife food plots

Apply 26 ounces to 4 quarts of this product in 5 to 15 gallons of water per acre using aerial (helicopter only) applications.

To broaden the spectrum of control, Garlon 4 may be tank mixed with this product at the rate of 0.5 to 2 quarts per acre. The rate of Garlon should not exceed 1/2 the rate of this product (e.g. 1 quart of Garlon to 2 quarts of this product) for best results.

Do not contaminate water when disposing of equipment washwaters.

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.

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

Ensure uniform application - To avoid streaking, 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 is most susceptible.

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#### LIST OF CHANGES THIS SUBMISSION

Added options for refillable container statements.

Revised format for first aid per PR notice standard.

Added additional PPE statements consistent with 524-512 language and WPS requirements.

Added reference to Monsanto supplemental labeling under directions for use, consistent with all other Monsanto product labels

Revised storage and disposal consistent with new required language for refillable containers as appoved by EPA.

Deleted Environmental Fate, Volatiity and Grazing restrictions for Utility Rights of way as directed by EPA Added generic Al reference language and reference to maximum Glyphosate or suffsate combined annual rates consistent with 524-512 approval

Added information on Weed Resistance section 5.1 consistent with other Roundup registrations and PR Notice 2001-5

7.3 heading changed for clarity, high-volume not really an application type

Moved Spray Drift language to after Aerial Application, consistent w/ crop glyphsoate labels

Expanded Forestry Site Prep section 8.2 instructions, removed specific broadcast rates and refered users to specific tank mix label rates.

Expanded sites listed to remove statement "and other similar sites" as requested by recent EPA approval letters for other Monsanto non-crop products

Revised tank mix section instructions and tank-mix products listed in all applicable sections

Converted all fractional rate references to decimal consistent with the rest of the label references

Incorporated approved supplemental language for Bromus Species and medusahead in pastures and Rangelands under section 8.3

Added grazing instructions under Turfgrass Renovation, seed or sod production section.

Added the following noncrop sections from master label registration on 524-512

Conservation Reserve Program

Grass Seed or Sod Production

**Pastures** 

**Habitat Management** 

Added 6 applicable noncrop supplemental labels from current 524-512, which has same formulation and supporting data last approved 31 October 2001

Added to supplemental labels the California Aerial Application Supplemental approved separately 5 October 2000