

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

JAN 14 2004

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Mr. J. S. Lovell Nations Ag II, LLC 4680 Monticello Avenue #18i-174 Williamsburg, VA 23188

Dear Mr. Lovell:

Subject: Nations Ag II Glyphosate (Add Industrial, Turf, and Ornamental Uses)
EPA Registration No. 72167-23
Application Dated October 23, 2003

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. Under "Storage and Disposal" revise "Storage" to read "Pesticide Storage".
- 2. Incorporate the following bulk container language into your Storage and Disposal".

Bulk Container Language

Incorporate the following Bulk Container Language into your Storage and Disposal section.

Container Disposal (Bulk and Minibulk)

When the container is empty, replace the cap and seal all openings that have been opened during use, and return the container to the point of purchase, or to an alternate location designated by the registrant at the time of purchase of this product. If not returned to the point of purchase or to a designated location, triple rinse or pressure rinse the empty container and offer for recycling if available.

Instructions for Users and Refillers

The container must only be refilled with this pesticide product. **Do not Reuse the Container for Any other Purpose.** Do not transport if this container is damaged or leaking if the container is damaged, leaking, or obsolete, or to obtain information about recycling refillable containers, contact (insert company name) at (insert phone number). Cleaning is not necessary prior to refilling with the same product. Clean container before final disposal. Disposal of this container must be in compliance with state and local regulations.

## Instructions for Refillers

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. If the container can not be refilled, triple rinse or pressure rinse the empty container and offer for recycling if available.

Submit three (3) copies of your final printed labeling incorporating the above changes before you release the product for shipment. Amended labeling will supercede all previously accepted ones. A stamped copy of labeling is enclosed for your records.

Sincerely,

James A. Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505C)



MITH COMMENTS IN EPA Letter Booted

JAN 14 2004

**ACTIVE INGREDIENT:** 

\*Glyphosate, N-(phosphonomethyl) glycine, in the form of its isopropylamine salt OTHER INGREDIENTS: 

\*This product contains 480 grams per liter or four pounds per U.S. gallon of glyphosate—the active ingredient—in the form of its isopropylamine salt. This equals 356 grams per liter, or three pounds per U.S. gallon of the acid, glyphosate.

Ena Reg. No. 72167-23

\_\_\_\_ EPA Est. No. 66196-CA-1 EPA Est. No. 37429-GA-1

## KEEP OUT OF REACH OF CHILDREN **WARNING - AVISO**

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

See inside booklet for complete Precautionary Statements, Directions for Use, and Conditions of Sale

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING! AVISO! CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY. HARMFUL IF SWALLOWED OR INHALED. Do not get in eyes or on clothing. Avoid breathing vapor or spray mist.

#### **FIRST AID**

IF IN EYES:

Immediately hold eyelids open and flush with plenty of water for at least 15 minutes. Remove contact lenses, if present, after first 5 minutes then continue rinsing eyes. Get medical attention.

IF INHALED:

Remove individual to fresh air. If not breathing, give artificial respiration. preferably mouth-to-mouth. Get medical attention.

atemtF SWALLOWED: This product will cause gastrointestinal tract irritation. Immediately dilute by swallowing water or milk, Get medical attention.

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

HAVE THE PRODUCT CONTAINER OR LABEL WITH YOU WHEN CALLING A POISON CONTROL CENTER OR DOCTOR, OR GOING FOR TREATMENT

For medical emergencies involving this product, call 1-800-308-5391.

#### PRECAUTIONARY STATEMENTS

### Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks, and protective eyewear. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

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

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170 240 (d) (4-6)), the handler PPE requirements may be reduced or modified as specified in the

#### User Safety Recommendations:

#### Users should:

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

#### Environmental Hazards

Opino; 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 of equipment or disposing of incurement washwaters

#### Physical or Chemical Hazards

Physical or Chemical Hazards

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When using spray solutions of this product, mix, store, and apply only in stainless sieet, Tree/glass. aluminum, plastic, or plastic-lined steel containers.

DO NOT USE GALVANIZED STEEL OR UNLINED STEEL (EXCEPT FOR STAINLESS STEEL) CONTAINERS OR SPRAY TANKS WHEN SPRAYING, MIXING, STORING, OR APPLYING THIS PRODUCT. Glyphosate 4, or spray solutions with this product, react with these containers to produce hydrogen gas, a possibly very highly-combustible gas mixture that could explode or flash. thereby causing serious personal injury if ignited by spark, welder's torch, lighted cigarette, open flame, or other ignition source.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

#### 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 (RE!) of 12 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, chemical-resistant gloves made of any waterproof material, shoes plus socks, and protective eyewear.

#### Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.

#### STORAGE AND DISPOSAL

Storage: Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Keep container closed to prevent spills and contamination. Store product in original container only

Product Disposal: Wastes that result from using Glyphosate 4 that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal, or in accordance with all applicable Federal, state, or local procedures.

Empty containers retain vapor and product residues. Follow all labeled safeguards until container is cleaned, reconditioned, or destroyed.

#### Container Disposal:

For Refillable Portable Containers: Do not reuse this 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 Bulk Containers: Triple rinse emptied bulk container. Then offer for recycling or reconditioning, or dispose of in a manner approved by state and local authorities

For Plastic 1-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 Drums: 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 in burned, stay out of smoke

#### **GENERAL INFORMATION**

DO NOT ALLOW CONTACT WITH EXPOSED NON-WOODY ROOTS, FRUIT, FOLIAGE C'9 GREEN STEMS OF DESIRABLE TREES AND PLANTS AS SEVERE PLANT INJURY OR DESTRUCTION COULD RESULT.

Use only in accordance with instructions on this label. Read the entire label before use, including the LIMITED WARRANTY, TERMS OF SALE, AND LIMITATIONS OF LIABILITY section. If the terms in this section are not acceptable, immediately return unopened product.

GLYPHOSATE 4 IS AN END-USE PRODUCT AND IS NOT REGISTERED FOR REFORMULATION.

DO NOT APPLY GLYPHOSATE 4 BY AIR, EXCEPT UNDER SPECIFIC CONDITIONS LISTED WITHIN THIS LABEL.

Glyphosate 4 is a water soluble liquid that readily mixes with water for application as a foliar spray to control or destroy most herbaceous plants. This product can be applied by using most standard industrial or field-type sprayers after it is diluted and thoroughly mixed with water.

Glyphosate 4 works by moving through the plant from where it contacts the foliage to and into the root system. Within 2 to 4 days, visible effects on most annual weeds are apparent; however, effects may not be visible on most perennial weeds for 7 days or more. Effectiveness and visual effects of this product may be slower if vary cool or cloudy weather follows treatment. A gradual witting and yellowing of the plant will be visible, which then advances to total browning of all above-1 growth and deterioration of underground plant parts.

Uniess stated otherwise within this label, application should be delayed until vegetation has emerged and has reached the specific stages described for control of vegetation under the WEEDS CONTROLLED sections of this label. Unemerged plants that arise from unattached underground rhizomes or root stocks of perennials are not affected by Glyphosate 4, and will keep growing. Because of this, treatment should be made at late growth stages (approaching maturity) for best control of the majority of perennial weeds:

Always apply the higher rate of this product per acre within recommended ranges when weed growth is heavy or dense, or, when weeds are growing in a noncultivated, nondisturbed area.

Reduced weed control may result if weeds are treated when drought stress, insect damage, or disease is present. Additionally, if weeds are heavily covered with dust, reduced weed control will result

Effectiveness may be reduced if applications are made to annual or perennial weeds that have been grazed, mowed or otherwise cut, unless they have been permitted to regrow to their recommended stages for treatment.

If rainfall or irrigation occurs within 6 hours of application, reduced effectiveness may result. Heavy irrigation or rainfall within 2 hours of application may wash off the chemical from foliage. In this case, a repeat treatment may be required.

Glyphosate 4 does not provide residual weed control. Use a label-approved herbicide program if subsequent residual weed control is desired. Users must read and carefully observe all cautionary statements and all other information on labels of all herbicides used.

Buyer and users are responsible for all losses or damage resulting from the use and/or hamiling of mixtures of Glyphosate 4 with herbicides or other materials that are not specifically recommended on this product label. Reduced performance may result if users mix Glyphosate 4 with other herbicides or other products not recommended on this label.

Best results are obtained with uniform and complete spray coverage. However, do not spray weed tollage to the extent of runoff.

DOMESTIC ANIMALS: Glyphosate 4 is considered to be relatively nontoxic to dogs and other domestic animals. Note, however, that ingestion of this product, or of large amounts of vegetation that has been freshly sprayed with this product, may cause temporary gastrointestinal irritation, such as diarrhea, colic, vomiting, etc. If these symptoms are observed, the animal should be given plenty of fluids in order to prevent dehydration. A veterinarian should be contacted in the event symptoms persist for more than 24 hours.

NOTE: Using this product in a manner not consistent with the product label may result in personal injury, injury to animals or crops, or in other unintended consequences.

## MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT WITH THE CAPACITY TO DELIVER THE DESIRED VOLUMES. DO NOT APPLY WHEN WIND OR OTHER CONDITIONS FAVOR DRIFT, DIRECT HAND-GUN APPLICATIONS PROPERLY TO AVOID SPRAYING DESIRABLE PLANTS. NOTE: POOR RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED. SUCH AS WATER FROM PONDS AND UNLINED DITCHES.

For mixing, additives, and application instructions for Industrial, Turf, and Ornamental uses, see the section titled NON-CROP USES.

## MIXING

Glyphosate 4 mixes readily with water. Spray solutions of this product should be mixed in accordance with the following: Fill the mixing/spray tank with the correct amount of water. Then add the recommended amount of Glyphosate 4 (per the DIRECTIONS FOR USE and WEEDS CONTROLLED sections) near the end of the filling process. Mix well. Be careful to avoid back siphoning. If required by state or local regulations, use approved anti-back-siphoning devices. When

mixing and applying this parduct, foaming of the spray solution can occur. To minimize or prevent foam, do the following do not use mechanical agitators; terminate by pass and return lines at tank botton, and, if newspassary, see an approved defoaming or anti-foam agent.

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#### TANK MIXTURES

Always pradetermine the compatibility of labeled tank mixtures of Glyphosate 4 with water carriers by first mixing small, proportional quantities in advance.

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

Mix labeled tank mixtures of Glyphosate 4 with water as described below:

- 1. Place a wetting basket or a 20 to 35 mesh screen over filling port.
- 2. Fill through the screen, adding one half the total amount of water, then start agitation.
- If using ammonlum sulfate, add it slowly through the screen into the tank. Continue agitation. Ensure that dry ammonlum sulfate is completely dissolved in the spray tank before the addition of other products.
- If using a wettable powder, first make a slurry with the water carrier, and SLOWLY add it through the screen into tank. Continue agitating.
- If using a flowable formulation, premix one part flowable with one part water. SLOWLY add diluted mixture through screen into tank. Continue agitating.
- 6. If using an emulatifiable concentrate formulation, premix two parts water with one part emulatifiable concentrate. Then slowly add diluted mixture through the screen into tank. Continue agitating.
- 7. Continue filling spray tank with water and add required amount of Glyphosale 4 when approaching the end of the filling process.
- 8. If nonionic surfactant is recommended, add it to the spray tank before ending the filling process.
- Individual formulations are added to the spray tank in the following order: Wettable powder;
   flowable; emulsifiable concentrate; drift control additive; water soluble liquid (e.g., Glyphosate 4) followed by surfactant.

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

To minimize foaming, keep the by-pass line on or near the bottom of the tank. The screen size used in line or nozzle strainers should be no finer than 50 mesh. Avoid spraying a fine mist by carefully selecting the proper nozzle. For best results when using conventional ground application equipment, flat fan nozzles should be used.

Clean sprayer and parts immediately when finished using this product by thoroughly flushing with water.

### ADDITIVES

#### SURFACTANTS

Use only nonionic surfactants approved for use with herbicides. Do not reduce rates of Glyphosate 4 when adding surfactant. Use 0.5 percent surfactant concentration (which is 2 quarts per 100 gallons of spray solution) when using those surfactants containing a minimum of 70 percent active ingredient, or a 1 percent surfactant concentration (which is 4 quarts per 100 gallons of spray solution) for those surfactants that contain leas than 70 percent active ingredient. Read and carefully observe cautionary statements and all other information that is listed on the surfactant label.

#### **AMMONIUM SULFATE**

Adding 1 to 2 percent dry ammonium sulfata by weight (8.5 to 17 pounds per 100 gallons of water) may improve the performance of Glyphosate 4, particularly under hard water conditions, drought conditions or when tank mixing with contain residual herbicides, on perennial and annual weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Dry ammonium sulfate must be completely dissolved in the spray tank before adding herbicides or surfactants. Ensure the spray system is thoroughly rinsed with clean water after use to reduce corrosion. Adding the same amount of dry ammonium sulfate may also increase the performance of Glyphosate 4 plus 2.4-D 8anvel<sup>71</sup> or residual herbicide tank mixtures on perennial and annual weeds. If environmental stress is present, performance improvement may be more apparent.

Please note that nozzle tip plugging may result if low quality ammonium sulfate (that contains material that cannot readily dissolve) is used. To determine the quality of dry ammonium sulfate, conduct a jar test by adding 1/3 cup of ammonium sulfate to 1 gallon of water, then agitate for 1 minute. If the test leaves some sediment undissolved, predissolve the ammonium sulfate in water, then filter prior to adding it to the spray tank. If adding ammonium sulfate directly to the spray tank, add it slowly with agitation. Adding it too quickly could block the outlet line. Ammonium sulfate must be completely dissolved in the spray tank before adding surfactant or herbicides. Users should thoroughly rinse the spray system with clean water when spraying is completed to reduce corrosion.

NOTE: Using ammonium sulfate as an additive does not preclude any requirements for additional surfactant. Do not use herbicide rates that are lower than those recommended on this label

### **COLORANTS OR DYES**

Colorants or marking dyes that are agriculturally approved may be added to Glyphosate 4 However, dyes or colorants used in spray solutions of Glyphosate 4 may reduce product

effectiveness, especially when used at lower rates or dilutions. Follow all manufacturer's recommendations when using colorants or dyes.

#### DRIFT CONTROL ADDITIVES

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and Controlled Droplet Applicator (CDA) equipment. When using a drift control additive, read and carefully observe all cautionary statements and all other information appearing on the additive label. Using drift control additives can affect spray coverage which may result in reduced performance

#### APPLICATION EQUIPMENT AND TECHNIQUES

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

The following application equipment may be used when applying this product.

By Air: Helicopter and Fixed Wing

#### By Broadcast Spray:

Controlled Droplet Applicator (CDA)—Boom mounted or hand held applicators that produce spray with a narrow range of droplet sizes.

Hand-Held and High-Volume Spray Equipment—Pump up pressure sprayers handguns, mistblowers\*, handwards, knapsack and backpack sprayers, lances and other hand held and motorized spray equipment used to direct the spray directly onto the weed foliage

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

Injection Systems—Aerial or ground injection sprayers.

\* This product is not registered in Arizona or California for application with

Selective Equipment-Wiper applicators, shielded sprayers, and recirculating sprayers

Review the Selective Equipment section of the discussion below for rates of application and specific instructions

#### SPRAY DRIFT MANAGEMENT

IMPORTANT: AVOID SPRAY DRIFT. EXERCISE EXTREME CAUTION WHEN APPLYING GLYPHOSATE 4 TO AVOID INJURY TO DESIRABLE CROPS AND PLANTS.

The herbicide solution must not be permitted to drip, splash, mist, or drift onto desirable vegetation because very small quantities of this product can severely damage or destroy crops, plants, or other planted areas that were not intended for treatment

rling spray drift is the responsibility of the applicator. The potential for spray drift is determined interaction of many equipment and weather related factors. All applicators and growers or consider all of these factors when making decisions regarding product application.

#### **AERIAL EQUIPMENT**

Unless otherwise specified on this label, use Glyphosate 4 in 3 to 15 gallons of water per acre. For specific Glyphosate 4 rates, review the WEEDS CONTROLLED sections of this label. Do not exceed 1 quart Glyphosate 4 per acre unless otherwise specified. Aerial applications of Glyphosate 4 may be made in preharvest applications, fallow and reduced tillage systems, and annual cropping conventional tillage systems. For recommended volumes and application rates, review the individual use area sections of this label. FOR AERIAL APPLICATION IN ARKANSAS, CALIFORNIA, OR FRESHO COUNTY, CALIFORNIA, REFER TO THE "SUPPLEMENTAL USES" SECTION AT THE END OF THIS LABEL FOR SPECIFIC RESTRICTIONS, INSTRUCTIONS, AND REQUIREMENTS.

Glyphosate 4 plus dicamba tank mixtures may not be applied by air in California.

#### AERIAL SPRAY DRIFT MANAGEMENT

To avoid off-target drift movement, the following drift management requirements must be followed during aerial applications.

- 1. The distance of the outermost nozzles on the boom must not be more than 3/4 the length of the rotor or the wingspan
- 2. Nozzles must always be pointed backward parallel with the air stream and must never be pointed downward at more than 45 degrees. Some states have more stringent regulations that must be observed

### Importance of Droplet Size

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

   Pressure: Use the lower spay greatures recommended for the nozzle. Higher pressure reduces proplet size and does not irreprove canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles: Use the minimum number of nozzles that provide uniform coverage
- . Nozzle orientation: Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential,
- Nozzle type: Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- . Boom Length: For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width
- . Application Height: Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

#### Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind 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.).

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph 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).

Avoid direct application to any body of water.

Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label

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

After each day of spraying, aircraft must be thoroughly washed—especially the landing gear—to remove product residues that have accumulated from spraying or from spills. UNCOATED STEEL SURFACES ARE SUSCEPTIBLE TO CORROSION FROM PROLONGED EXPOSURE TO THIS PRODUCT. FAILURE OF THE PART DUE TO CORROSION IS ALSO POSSIBLE. LANDING GEAR ARE MOST SUSCEPTIBLE. The application and maintenance of an organic coating of paint that meets aerospace specification MiL-C-38413 may help in preventing corrosion.

NOTE: Aerial application of Glyphosate 4 plus Oust\*, 2,4-D or Banvel tank mixtures are not permitted in California. For tank mixes in all other states, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

#### BROADCAST EQUIPMENT

For control of those perennial or annual weeds listed on this label, using broadcast equipment. Unless otherwise specified on this label, use the recommended rates of Glyphosate 4 in 3 to 40 gallons of water per acre. Review the WEEDS CONTROLLED sections of this label for specific rate information. As weed density increases, spray volume should increase (within the recommended range) to ensure adequate coverage. Avoid spraying a fine mist by carefully selecting the proper nozzle. Use flat fan nozzles for best results when using ground application equipment. Apply with an even distribution of spray droplets.



#### 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.

#### CONTROLLED DROPLET APPLICATION (COA)

When applying Glyphosate 4 by vehicle mounted CDA equipment, the rate of this product per acre must not be less than the amount recommended on this label when applied by conventional broadcast equipment. For vehicle mounted CDA equipment, use 3 to 15 gallons of water per acre.

To control labeled annual weeds with hand held CDA equipment, apply a 20 percent solution of Glyphosate 4 at a flow rate of 2 fluid ounces per minute and a walking speed of 2.2 feet/second (equivalent to 1 quart per acre). To control labeled perennial weeds, apply a 20 to 40 percent solution of Glyphosate 4 at a flow rate of 2 fluid ounces per minute with a walking speed of 1.1 feet/second (equivalent to 2 to 4 quarts per acre).

The spray pattern of CDA equipment is not easily visible. Exercise extreme care to avoid spray or drift contacting any foliage or green tissue of desirable vegetation. Severe damage or destruction may result

#### HAND-HELD and HIGH-VOLUME EQUIPMENT

#### e coarse sprays only

Clean water should be used when mixing this product; then apply to the foliage of vegetation to be controlled. For those applications that are to be made on a spray-to-wet basis, ensure uniform and complete spray coverage. Do not spray product to the point of runoff.

To control annual weeds that are listed on this label, spray a 0.5 percent solution of Glyphosate 4 plus nonionic surfactant to weeds that are smaller than 6 inches in height or runner length. This product should be applied before seedhead formation in grass, or before bud formation in broadleaf weeds. Do not till or mow for at least three days after application, unless otherwise specified.

Unless otherwise specified, for annual weeds over 6 inches tall, or if additional surfactant is not to be used, use a 1 percent solution. On harder to control perennials (such as dock, field bindweed, hemp dogbane, bermudagrass, milkweed and Canada thistle), best results are obtained by using a 2 percent solution.

If using application methods that result in less than lotal coverage, a 5 percent solution should be used for perennial and annual weeds, and use a 5 to 10 percent solution for trees and woody brush.

To prepare the desired volume of spray solution, mix the proper amount of Glyphosate 4 in water in accordance with the table below

#### Spray Solution

DESIRED		AMO	OUNT OF G	LYPHOSAT	Ē 4		
OLUME	1/2%	1 %	1 1/2 %	2 %	5%	10%	
' gallon	2·3 oz	1-1/3 oz	2 02	2-2/3 oz	6-1/2 oz	13 oz	
25 gallons	1 ot	1 q1	1-1/2 qt	2 qt	5 qt	10 qt	
*00 gallons	2 qt	' gal	1-1/2 gal	2 gal	5 gal	10 gai	

Note: 2 tablespoons = 1 fluid ounce

When using knapsack sprayers, mix the recommended amount of Glyphosate 4 with water in a larger container. Then fill sprayer with the mixed solution.

#### SELECTIVE EQUIPMENT

Glyphosate 4 may be applied through a recirculating spray system, a hooded sprayer, a sponge bar, a woper applicator, or a shielded applicator after dilution and thorough mixing with water. It may be applied to the weeds listed on this label that are growing in any non-crop site specified on this label, but only when specifically recommended in cropping systems.

A recirculating spray system works by directing the spray solution onto those weeds growing above desirable vegetation. Any spray solution not intercepted by the weeds is then collected and returned to the sprayer for reuse

A shielded applicator works by directing the herbicide solution onto weeds, while at the same time shielding desirable vegetation from the herbicide.

A wiper applicator works by rubbing weeds with an absorbent material that contains the herbicide solution

IMPORTANT: DO NOT LET THIS PRODUCT OR SPRAY MIXTURE COME INTO CONTACT WITH DESIRABLE VEGETATION

If this product comes into contact with desirable vegetation, severe damage or destruction may result. Adjust applicators that are used above desired vegetation to ensure the lowest spray stream or wiper contact point is a minimum of 2 inches above desirable vegetation. Discoloration, stunning or plant destruction may result if mist, foam, droplets, or splatter of the herbicide solution settles on desirable vegetation.

Applications matte above the crops should be made when the weeds are a minimum of 6 inches above the instrable regulation. 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 APPLICATORS

When this product is applied in accordance with label instructions for shielded applicators. Glyphosate 4 will control weeds listed in the WEEDS CONTROLLED sections of this label

The following calculation should be used to convert from a broadcast rate per acre to a band rate per acre:

Band width		Herbicide		Herbicide	
<u>in inches</u>	Х	Broadcast	=	Band RATE	
Row width		RATE		per acre	
in inches		per acre			
Band width		Broadcast		Band	
in inches	X	VOLUME of	=	VOLUME	
Row width		solution		of solution	
in inches		per acre		per acre	

Nozzles that provide uniform coverage within the area treated should be utilized. To protect desirable vegetation, make sure shields on shielded sprayers are adjusted properly. EXERCISE EXTREME CAUTION TO AVOID HERBICIDE CONTACT WITH DESIRABLE VEGETATION

See the WEEDS CONTROLLED sections of this label for specific rates of application and instructions for control of perennial and annual weeds.

#### WIPER APPLICATORS AND SPONGE BARS

Wiper applicators are meant to physically wipe an appropriate amount of Glyphosate 4 onto weeds

Wiper applicator equipment must be designed, operated, and maintained to ensure the herbicide solution does not contact desirable vegetation. This equipment should be operated at ground speeds of 5 mph or less. Improved performance may be attained by reducing speed in areas having heavy weed infestations; this ensures adequate wiper saturation. Better results are possible if 2 applications are made in opposite directions.

Avoid dripping or leaking herbicide onto desirable vegetation. To ensure adequate contact with weed surfaces, adjust the height of the applicator. Wiping surfaces should be kept clean. If applying on sloping ground, this product may migrate, thereby causing dripping on the lower end and wick drying on the upper end of the wiper applicator.

If weeds are wet, do not use wiper equipment.

When mixing the herbicide solution, mix only enough solution to be used during a 1 day period: reduced effectiveness may result from using leftover solution amounts. Wiper parts should be cleaned immediately by thoroughly flushing with water when application is completed

Do not add surfactant to the herbicide solution.

For Rope or Sponge Wick Applicators – Mix 1 gallon of this product in 2 gallons of water to prepare a 33 percent solution. Apply this solution to weeds listed in this WIPER APPLICATORS AND SPONGE BARS section. For Industrial, Turf, and Ornamental uses, solutions ranging from 33 to 75 percent of Glyphosate 4 in water may be used.

For Porous-Plastic Applicators: Solutions varying from 33 to 100 percent of Glyphosate  $4\,\mathrm{m}$  water may be used.

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

Glyphosate 4 CONTROLS the weeds listed below when applied using WIPER APPLICATORS AND SPONGE BARS as recommended under this section.

### ANNUAL GRASSES

Corn Zea mays

Panicum Texas

Panicum, texas

Rye, common Secale cereale

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Shattercane Sorghum bicolor

#### ANNUAL BROADLEAVES

Sicklepod

Cassia obtusifolia

Spanishneedles

Ridens bininnata

Starbur, bristly

Acanthospermum hispidum

Glyphosate 4 SUPPRESSES the weeds listed below when applied using WIPER APPLICATORS AND SPONGE BARS as recommended under the conditions described in this section.

#### ANNUAL BROADLEAVES

Beggarweed, Flonda

Desmodium tortuosum

Dogtennel Eupatorium capilliflorium

Pigweed, redroot Amaranthus retroflexus

Ragweed, common Ambrosia artemisifolia

Ragweed, giant

Sunflower
Helianthus annuus

Thistle, musk

veivetleaf Abutilon theophrasti

#### PERENNIAL GRASSES

Bermudagrass
Cynodon dactylon

Guineagrass
Panicum maximum

Johnsongrass Sorghum halepense

Smutgrass Sporobolus poitetii

Vaseygrass Paspalum urvillei

#### PERENNIAL BROADLEAVES

Dogbane, hemp Apocynum cannabinum

"weed celepias syriaca

Nightshade, silverleaf Solanum elaeagnilolium

Thistle, Canada Cirsium arvense

## **WEEDS CONTROLLED**

This product controls many annual and perennial grasses and broadleaf weeds. For Industrial, Turf, and Ornamental use applications, see the section titled NON-CROP USES for specific weeds controlled

### ANNUAL WEEDS

- · Apply to actively growing grass and broadleaf weeds.
- Allow at least 3 days after treatment before tillage, unless otherwise specified
- + For maximum agronomic benefit, apply when weeds are 6 inches or less in height.
- · Apply this product before seedhead formation to prevent seed production.
- Because Glyphosate 4 does NOT provide residual control, delay application until maximum weed emergence. Users may have to repeat treatments to control weeds that germinate later.

### LOW-VOLUME BROADCAST APPLICATION (LOW-RATE TECHNOLOGY)

Glyphosate 4 CONTROLS the weeds listed below when applied as follows:

- 1 Recommended water carrier volumes, unless otherwise specified: 3 to 10 gallons per acre for ground applications, and 3 to 5 gallons per acre when applying by air. (For approved sites, review the section of this rabel titled APPLICATION EQUIPMENT AND TECHNIQUES.)
- 2. A perionic surfactant may be added at 0.5 to 1 percent by total spray volume. When using surfactants containing a minimum of 70 percent active ingredient, use 0.5 percent surfactant.

concentration. When using surfactants containing less than 70 percent active ingrecient, use a \*percent surfactant concentration.

#### NOTE

Senecio vulgaris

- Improved performance on annual weeds may be attained with the addition of 2 percent dry ammonium sulfate by weight, or 17 pounds per 100 gallons of water. Review the sections of this label titled MIXING ADDITIVES and APPLICATION INSTRUCTIONS.
- . Unless otherwise specified, do not tank mix with soil residual herbicides when using these rates
- . If weeds have been grazed, cut, or mowed, allow regrowth to occur prior to applying this product
- For control of additional broadleaf weeds, review the section of this label titled TANK MIXTURES

WEED SPECIES	MAXIMUM HEIGHT / LENGTH	RATE PER ACRE* (Fluid Ounces)	<del></del>
Foxtail Selaria spp.	12"	8 oz.	
Barnyardgrass Echinochloa crus-galli	6" (0 to 4")	12 oz. (16 oz. <sup>1</sup> )	
Bluegrass, annual <i>Poa annua</i>	(4 to 6")	(24 oz. <sup>1</sup> )	
Brome, downy** Bromus tectorum			v
Mustard, blue Chorispora tenella			•.
Mustard, tansy Descurainia pinnata			
Mustard, tumble Sisymbrium altissimum			
Musterd, wild Sinapis arvensis	6"	12 oz.	
Spurry, umbrella Holosteum umbellatum			
Barley Hordeum vulgare	12"		
Rye, common Secale cereale			
Sandbur field Cenclinus upp.			
Shattercane Sorghum bicolor			
Stinkgrass Eragrostis cilianensis	200 mm 200 -		
Wheat Triticum aestivum	18"		
Morningglory Ipomoea spp.	2"	16 oz.	
Sicklepod Cassia obtusifolia	· · · · · · · · · · · · · · · · · · ·		
Bluegrass, bulbous Poa bulbosa	67		
Cheat Bromus secalinus			
Chickweed, common Stellaria media			
Chickweed, mouseear Cerastium vulgatum			
Corn Zea mays			
Goatgrass, jointed Aegilops cylindrica			
Groundsel, common			

WEED SPECIES	MAXIMUM HEIGHT / LENGTH	RATE PER ACRE* (Fluid Ounces)	WEED SPECIES MAXIMUM HEIGHT / RATE PER ACRE- LENGTH (Fluid Ounces)
Henbit Lamium amplexicaule	6"	16 pz.	Goosegrass 12" 32 oz. Eleusine indice
Horseweed/Marestail*** Conyza canadensis			Primrose, cutleaf evening Oenothera laciniate
ambsquarters, common Chenopodium album			Pusley, Florida Richardia scabra
Pennycress, field Fanweed Thlaspi arvense			Sicklepod 5 to 12"  Cassia obtusifolia
Rocket, London Sisymbrium irio			Spanishneedles Bidens bipinnata
Ryegrass, italian			Fileree 12" 48 oz. Erodium spp.
Shepherd's Purse Capsella bursa-pastoris			Sprangietop Laptochioa spp.
irge, annual .phorbia spp.			'Use these rates to control barnyardgrass in Alabama, Arkansas, Mississippi, Missouri. Louisiana and Texas for preplant treatments.
Buttercup Ranunculus spp.	12"		* For those weeds with recommended rates of less than 32 fluid ounces per acre, this product m be used at rates up to 32 fluid ounces per acre where heavy weed densities exist.
Cocklebur			" Use 16 fluid ounces per ecre for control in no-till systems.
Xanthium strumarium Crabgrass	*		*** Resistance to some biotypes has been observed. If users encounter resistant biotypes, they should contact their local extension service for tank mix recommendations.
Digitaria spp  Dwarf dandelion			IANK MIXTURES
Krigia cespilosa Falseflax, smallseed			GLYPHOSATE 4 plus BANVEL plus NONIONIC SURFACTANT
Camelina microcarpa			● GŁYPHOSATE 4 plus 2,4-D plus NONIONIC SURFACTANT
Foxtail, Carolina Alopecurus carolinianus			IN CALIFORNIA, DO NOT APPLY BANVEL OR 2,4-D TANK MIXTURES BY AIR.
Johnsongrass, seedling Sorghum halepense			These tank mixtures are recommended for use in fallow and reduced tillage areas only. Follow use directions as given in the LOW-VOLUME BROADCAST APPLICATION section.
Oats, wild Avena fatua			For tank mixture instructions relating to Industrial, Turf, and Ornamental applications, see the section titled NON-CROP USES.
Panicum, fall Panicum dichotomiflorum			A mixture of Glyphosate 4 plus 2,4-D or Banvel can be used to control the broadleaf weeds and annual grasses listed for Glyphosate 4 sione at the indicated heights (except applications at 8 ftd.
Panicum, Texas Panicum texanum			ounces per acre), plus the broadleaf weeds listed below. For weeds listed at 8 fluid ounces per acre of Glyphosate 4 alone, 12 fluid ounces should be used in these tank mixtures.
Pigweed, redroot Amaranthus retroflexus			NOTE: For all products used in tank mixtures, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statement Also, review each product's label for crop rotation restrictions and cautionary statements. If Bank is mixed with Glyphosate 4, short term residual control of selected weed species may result.
Pigweed, smooth Amaranthus hybridus			However, some crop injury is possible if Banvel is applied within 45 days of planting.
Witchgrass Panicum capillare			To control dense populations of the annual broadleaf weeds listed below (when weeds are less than the indicated height), apply 12 to 16 fluid ounces of Glyphosate 4 plus 0.25 pound active ingredient of Banvel, or 0.5 pound active ingredient of 2,4-D, plus 0.5 to 1 percent nonionic
Sicklepod Cassia obtusifolia	3 to 4"	24 oz	surfactant by total spray volume per acre.  Cocklebur (12")
Signalgrass, broadleaf Brachiana platyphylla	4"		Xanthium strumarium  Kochia* (6")
Horseweed/Marestail*** Conyza canadensis	7 to 12*		Kochia scoparia  Lambsquarters (12")
Lambsquarters, common Chenopodium album	-*		Chenopodium album  Lettuce, prickly (6")
Spurge, annual Euphorbia spp.			Lactuca serriola  Marestail/Horseweed** (6")
Rice, red Oryza sativa	4"	32 oz.	Conyza canadensis  Morningglory (6")
Teaweed Sida spinosa			Ipomoea spp.  Pigweed, redroot (12")
Sprangletop Leptochloa spp	6"		Amaranthus retroflexus  Pigweed, smooth (12")
Geranium, Carolina	12"		Ameranthus hybridus

Thistle, Russian (12") Salsola kali

Kochia is controlled with a Banvel tank mixture only.

\*\* Resistance to some biotypes has been observed. If users encounter resistant biotypes, they should contact their local extension service for tank mix recommendations.

To control the annual broadleaf weeds listed below (when less than 6 inches in height), apply 16 fluid ounces of Glyphosate 4 plus 0.5 pound active ingredient of 2,4-D, plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre.

Ragweed, common Ambrosia artemisiifolia

Ragweed, giant Ambrosia trifida

Smartweed, Pennsylvania Polygonum pensylvanicum

Velvetleaf - Abutilon theophrasti

#### **VOLUME BROADCAST APPLICATIONS**

Glyphosate 4 will control weeds listed below when applied as directed using water carrier volumes of 10 to 40 gallons per acre for ground applications.

Unless otherwise specified, apply 1 to 1.5 quarts of Glyphosate 4 per acre plus 0.5 to 1 percent nonionic surfactant by total spray volume. 1 quart Glyphosate 4 per acre should be used if weeds do not exceed 6 inches tall, and 1.5 quarts per acre should be used if weeds are more than 6 inches tall. Before application, allow sufficient time for new growth to reach recommended stages if weeds have been cut, grazed, or mowed. These rates will also control weeds mentioned in the LOW VOLUME BROADCAST APPLICATION section of this label.

#### WEED SPECIES

Balsamapple\*

Momordica charantia

Bassia, fivehook
Bassia hyssopifolia

Brome Bromus spp

Fiddleneck
Amsinckia spp.

bane, hairy nyza bonanensis

Fleabane Erigeron spp

Kochia scopana

Lettuce, prickly

Panicum Panicum soo

Ragweed, common Ambrosia artemisiilolia

Ragweed, giant Ambrosia trifida

Smartweed, Pennsylvania Polygonum pensylvanicum

Sowthistle, annual Sonchus cleraceus

Sunflower
Helianthus annuus

Thistle, Russian Salsola kali

Velvetleaf

Abutilon theophrasti

#### PERENNIAL WEEDS

For controlling or destroying most perennial weeds, apply Glyphosate 4 as follows

For application instructions and perennial weeds controlled for Industrial, Turl, and Ornamental uses, see the section titled NON-CROP USES.

**NOTE:** In the event weeds have been tilled or mowed, do not treat plants until they have resumed active growth AND have reached the recommended stages.

It may be necessary to repeat treatments on those weeds that regenerate from underground parts or from seed. These repeat treatments must be applied before crops emerge.

Improved performance on perennial weeds may be attained with the addition of 1 to 2 percent dry ammonium sulfate by weight, or 8.5 to 17 pounds per 100 gallons of water. The increased effectiveness may be most apparent if environmental stress is present. Review the sections of this label titled MIXING ADDITIVES and APPLICATION INSTRUCTIONS.

Glyphosate 4 will CONTROL the PERENNIAL WEEDS listed below if applied as directed under the conditions described.

Alfalfa

Medicago sativa

Alligatorweed\*
Alternanthera philoxeroides

Anise (fennel)
Foeniculum vulgare

Artichoke, Jerusalem Hellanthus tuberosus

Bahiagrass
Paspalum notatum

Bentgrass

Agrostis spp.

Bermudagrass
Cynodon dactylon

Bermudagrass, water (knotgrass)
Paspalum distichum

Blndweed, field Convolvulus arvensis

Bluegrass, Kentucky
Poa spp.

Blueweed, Texas Helianthus ciliaris

Brackenfern Pteridenn aquillnum

Bromegrass, smooth Bromus inermis

Bursage, woollyleaf Franseria tomentosa

Canarygrass, reed
Phalaris arundinacea

Cattail
Typha spp

Clover, red Trifolium pratense

Clover, white Trifolium repens

Cogongrass Imperata cylindrica

Dallisgrass Paspalum dilatatum

Dandelion Taraxacum officinale

Dock, curly Rumex crispus

Dogbane, hemp

Apocynum cannabinum

Fescues Festuca spp.

<sup>&</sup>quot;Apply with hand-held equipment only

Fescue, tall Festuca arundinacea

Guineagrass
Pancium maximum

Horsenettle
Solanum carolinense

Horseradish
Armoracia rusticana

ice plant
Mesembryanthemum crystallinum

Johnsongrass Sorghum halepense

Kikuyugrass Pennisetum clandestinum

Knapweed
Centaurea repens

Lantana ntana camata

edeza Lespedeza spp

Milkweed Asciepias spp

Muhly, wirestem

Muhlenbergia frondonsa

Mullein, common Verbascum thapsus

Napiergrass
Pennisetum purpureum

Nightshade, silverleaf Solanum elaeagnifolium

Nutsedge; purple, yellow Cyperus rotundus Cyperus esculentus

Orchardgrass

Dactylis glomerala

Pampasgrass taderia spp

Paragrass
Brachiana mutica

Phragmites\*
Phragmites spp

Poison hemlock

Conium maculatum

Quackgrass
Agropyron repens

Redvine\* Brunnichia ovata

Reed, giant Arundo donax

Ryegrass, perennial Lolium perenne

Smartweed, swamp Polygonum coccineum

Spurge, leafy\*
Euphorbia esula

Starthistle, yellow Centaurea soistitalis

Sweet potato, wild\*

Ipomoea pandurata

Thistle Canada Orsrum arvense

\*histle larbehoke | Cynara cardunessus Timothy
Phleum pratense

Torpedograss\*

Panicum repens

Trumpetcreeper\*

Campsis radicans

Vaseygrass Paspalum urvillei

Velvetgrass Holcus spp.

Wheatgrass, western Agropyron smithii

\*Partial Control

Glyphosate 4 is NOT registered for use on water bermudagrass in California

For specific application instructions and labeled uses, review the DIRECTIONS FOR USE and MIXING, ADDITIVES, and APPLICATION INSTRUCTIONS sections of this label

Alfalfa: Use 1 quart of Glyphosate 4 per acre, plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply in the fall after the last hay cutting takes place. Alfalfa should be allowed to regrow to a minimum height of 6 to 8 inches prior to application. Follow applications with deep tillage a minimum of 7 days after treatment, but before soil freeze-up.

Alligatorweed: Use 4 quarts of Glyphosate 4 per acre, or a 1.5 percent solution with hand held equipment to obtain partial control. Applications should be made when the majority of plants are in bloom. Additional applications will be necessary to maintain control.

Anise (fennel); Polson hemlock: Use a 1 to 2 percent solution of Glyphosate 4 as a spray-towet treatment. Plants should be treated at the bud to full-bloom stage of growth to obtain best results. In order to control plants arising from seeds, repeat applications may be needed in succeeding years.

Bentgrass: Use Glyphosate 4 for suppression in grass seed production areas. For use by ground applications only. Apply 1.5 quarts of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant by total spray volume, in 10 to 20 gallons of water per acre. Prior to applying in the fall, ensure the entire crown area has resumed growing. Plants should be actively growing, and have a minimum of 3 inches of growth. Avoid tillage prior to application. For optimum results, tillage 7 to 10 days after application is recommended. Ineffective control of bentgrass may result if tillage is not used after treatment.

Bermudagrass: Use 5 quarts of Glyphosate 4 per acre for adequate control. Or, 3 quarts per acre will provide partial control. For best results, treat bermudagrass when it is actively growing, and when seedheads are present. A repeat application may be necessary to maintain control. Allow a minimum of 7 days after treatment before tillage.

Bermudagrass, water (knotgrass): Use 1.5 quarts of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant by total spray volume in 5 to 10 gallons of water per acre. Water bermudagrass should be actively growing—and 12 to 18 inches in length—for effective application Walt a minimum of 7 days before flooding the field, flushing, or tillage.

For fall treatment only: Use 1 quart of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant by

total spray volume in 5 to 10 gallons of water per acre. Till fallow fields prior to treatment. Apply prior to frost on plants that are actively growing and 12 to 18 inches long. Wait a minimum of 7 days before tillage.

Bindweed, field: For control of field bindweed, apply 3 to 4 quarts of Glyphosate 4 per acre east of the Mississippi River, and 4 to 5 quarts per acre west of the Mississippi River. Treatment should be applied when weeds are actively growing and are at or beyond full bloom. If the weed is under drought stress, do not treat—good soil moisture is needed for active growth. Apply in late summer or fall for optimum results, but fall applications must be made before a killing frost. Wait a minimum of 7 days after application before tillage.

For control using ground application equipment only, apply 2 quarts of Glyphosate 4 plus 0.5 pound active ingredient of Banvel in 10 to 20 gallons of water per acre.

The following tank mixtures with 2,4-D may be applied using aerial application equipment (except in California) in fallow and reduced tillage systems only.

To suppress field bindweed on irrigated agricultural land (using ground equipment only), mix and apply 1 to 2 quarts of Glyphosate 4 plus 1 pound of 2,4-D active ingredient in 10 to 20 gallons of water per acre. Apply after harvest, or in fall fallow ground when most of the runners are a minimum of 12 inches long and are actively growing. Use of at least one irrigation will promote active field bindweed growth.

For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. of 2.4-D plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

For all tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements

In California only: Use 1 to 5 quarts of Glyphosate 4 per acre. Depending on local conditions, the rate needed to suppress or control weeds will vary within this range.

To suppress field bindweed on imigated land where annual tillage is performed, apply 1 quart of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Bindweed should be a minimum of 12 inches long before application, with maximum weed emergence and runner growth. Treatments should not be made when weeds are under drought stress; good soil moisture is needed for active growth. Allow a minimum of 3 days after application before tillage.

Bluegrass, Kentucky; Bromegrass, smooth; Orchard-grass: Use 2 quarts of Glyphosale 4 in 10 to 40 gallons of water per acre. Apply when grasses are actively growing and when most plants have developed to the boot-to-early seedhead stage. For partial control in pesture or hay crop renovation, use 1 to 1.5 quarts of Glyphosale 4 plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply to actively growing weeds when most are 4 to 12 inches high. Wait a minimum of 7 days after treatment before tillage.

Orchardgrass (sods going to no-till corn): Use 1 to 1.5 quarts of Glyphosate 4 per acre plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Orchardgrass should be at least 12 inches high for spring treatment, and 6 inches high for fall treatment. Wait a minimum of 3 days before planting. For best results, a sequential application of atrazine is necessary. When using tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Texas Blueweed: Apply 3 to 4 quarts of Glyphosate 4 per acre east of the Mississippi River, and 4 to 5 quarts per acre west of the Mississippi River. Treat when weeds are actively growing and at full bloom or beyond. If weeds are under drought stress, do not treat—good soil moisture is ded for active growth. (If new leaves are developing, this indicates active growth.) Apply in

ded for active growth. (If new leaves are developing, this indicates active growth.) Apply in summer or fall for optimum results. Fall applications must be made before a killing frost. Wait a minimum of 7 days after treatment before tillage.

Brackenfarn: Using a broadcast spray, apply 3 to 4 quarts of Glyphosate 4 per acre. With hand held equipment, use a 1 to 1.5 percent solution. Treatments should be applied to fully expanded fronds that are a minimum of 18 inches in height.

Bursage, wooltyleaf: For control, apply 2 quarts of Glyphosate 4 plus 1 pint of Banvel per acre. For partial control, apply 1 quart of Glyphosate 4 plus 1 pint of Banvel per acre. Add 0.5 to 1 percent nonionic surfactant by lotal spray volume and apply in 3 to 20 gallons of water per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering. When using tank mixes, review the tank-mix herbicides individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Canarygrass, reed; Timothy; Wheatgrass, western: Apply 2 to 3 quarts of Glyphosate 4 per acre to actively growing plants when most have reached the boot-to-head stage of development. Wait a minimum of 7 days after treatment before tillage.

Cogongrass: Use 3 to 5 quarts of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant applied in 10 to 40 gallons of water per acre. Apply in late summer or fall when weeds are a minimum of 18 inches high and actively growing. Wait a minimum of 7 days after application before mowing or tillage. Because of uneven stages of growth and the danse nature of Cogongrass, good spray coverage is often difficult. Therefore, repeat treatments may be needed to maintain adequate control

nandelion / Dock, curly: Apply 3 to 5 quarts of this product per acre when plants are actively owing and most have reached the early bud stage of growth. Wait 7 or more days after application before tillage.

Another option for control: Apply 16 fluid ounces of Glyphosate 4 plus 0.5 pound of 2,4-D active ingredient plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallions of water per acre. When using tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Dogbane, hemp: Apply 4 quarts of Glyphosate 4 per acre when most weeds are actively growing and have reached the late bud to flower stage of development. Before treating after a crop harvest or mowing, allow weeds to regrow to a mature stage of development. Wait a minimum of 7 days after treatment before tillage.

For suppression, using ground applications only, apply 16 fluid ounces of Glyphosate 4 plus 0.5 pounds of 2,4-D active ingredient plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply after maximum emergence of dogbane has occurred. When using tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Fescue, tall: Apply 3 quarts of Glyphosate 4 in 10 to 40 gallons of water per acre to actively growing plants when most have reached boot-to-early seedhead stage of development.

For applications in fall only: Use 1 quart of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply in fall when weeds are actively growing and have reached 6 to 12 inches of new growth. Wait a minimum of 7 days after treatment before tillage. To improve long term control, and to control seedlings germinating after fall treatments (or the spring that follows), apply a sequential application of 1 pint per acre of Glyphosate 4 plus nonionic surfactant.

Guineagrass: Apply 3 quarts of Glyphosate 4 per acre, or when using hand held equipment, use a 1 percent solution. Apply when guineagrass is actively growing and when it has reached at least the 7 leaf stage of development. If using hand held equipment, ensure thorough coverage. Wait a minimum of 7 days after treatment before tillage.

Johnsongrass; Ryegrass, perennial: Use 1 to 3 quarts of Glyphosate 4 per acre. Use 1 to 2 quarts of Glyphosate 4 per acre in annual cropping systems. Use 1 quart of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Or use 2 quarts of Glyphosate 4 in 10 to 40 gallons of water per acre. In non-crop areas, or in areas where annual tiliage is not performed (no-till), use 2 to 3 quarts of Glyphosate 4 in 10 to 40 gallons of water per acre. Optimum results are obtained when applied to actively growing plants when

most have reached the boot-to-head stage of development, or in fall before frost. Wait a minimum of 7 days after treatment before tillage. If using the 1 quart per acre rate, do not tank mix with residual herbicides.

For Johnsongrass burndown, use 1 pint per acre plus 0.5 to 1 percent nonionic surfactant in 3 to 10 gallons of water per scre before the plants grow to a height of 12 inches. Wait a minimum of 3 days after application before tillage.

For spot treatment of Johnsongrass (partial control or suppression): When Johnsongrass has reached a height of 12 to 18 Inches, apply a 1 percent solution of Glyphosate 4 plus 0.5 to 1 percent nonlonic surfactant by total apray volume. Complete and uniform coverage is essential

Kikuyugrass: Use 2 to 3 quarts of Glyphosate 4 per scre. Spray when the majority of kikuyugrass is actively growing and is at a minimum of 8 inches high (at the 3 or 4 leaf stage of development). Wait a minimum of 3 days after treatment before tillage.

Knapweed; Horseradish: Use 4 quarts of Glyphosate 4 per acre when weeds are actively growing and when most have reached the late bud to flower stage of development. If treating after crop harvest or after mowing, allow weeds to regrow to a mature stage of development, then apply Apply treatment In late summer or fall for optimum results. Wait a minimum of 7 days after treatment before tillage.

Lantana: Apply Glyphosate 4 as a 1 to 1.25 percent solution using hand held equipment only. Treat actively growing lantane when it is at or beyond the bloom stage of development. The higher application rate of Glyphosate 4 should be applied for weeds that have reached the woody stage of development. Wait a minimum of 7 days after treatment before tillage.

Milkweed, common: Use 3 quarts of Glyphosate 4 per acre when milkweed is actively growing and when most of the weeds have reached the late bud to flower stage of development. If applying after small grain harvest or after mowing, allow milkweed to regrow to a mature stage prior to applying. Wait a minimum of 7 days after treatment before tillage.

Muhly, wirestem: Use 1 to 2 quarts of Glyphosate 4 per acre. Apply 1 quart of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Use 2 quarts of Glyphosate 4 per acre in 10 to 40 gallons of water per acre, or when applied in pasture, sod, or non-crop areas. Spray when weed is actively growing and at least 8 inches high. Do not till between harvest and fall applications, or in the fall or spring prior to spring treatments. Wait a minimum of 3 days after treatment before tillage. Glyphosate 4 will not provide residual control of wirestem muhly from seeds which germinate after this product is applied. When using the 1 quart per acre rate, do not tank mix with residual herbicides.

Nightshade, silverleaf: For control, use 2 quarts of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Do not apply until at teast 60 percent of the plants have berries. If applying in fall, do so before a killing frost. Wait a minimum of 7 days after treatment before tillage. If the weeds are under drought stress, do not treat—good soil moisture is needed for active growth.

Nutsedge-purple, yellow: Using a broadcast spray, apply 3 quarts of Glyphosate 4 per acre. If using hand held equipment, use a 1 to 2 percent solution to control existing nutsedge plants and immature nutlets that are attached to treated plants. Apply when weeds are in flower or when new nutlets are seen at rhizome tips. Nutlets that have not yet germinated will not be controlled and may germinate after treatment. For long term control of ungerminated tubers, repeat treatments will be necessary.

For control, apply sequential applications of 1 to 2 quarts of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Applications should be rische when a majority of the weeds are in the 3 to 5 leaf stage of development (when under 6 inches tall). Repeat this application as necessary when newly emerging weeds reach the 3 to 5 leaf stage of growth. For long term control, subsequent treatments are required.

For suppression or partial control of existing weeds, use 1 pint to 2 quarts of Glyphosate 4 per acre plus 0.5 to 1 percent nonionic surfactant in 3 to 40 gallons of water per acre. Apply when plants are 6 inches tail or less and have 3 to 5 leaves. Additional treatments will be necessary to control subsequent emerging weeds or regrowth of existing weeds. Wait a minimum of 7 days after treatment before mowing or tillage.

Pampasgrass / Ice plant: Using hand held equipment, apply Glyphosate 4 as a 1.5 to 2 percent solution to weeds that are actively growing. Apply when pampasgrass is at or beyond the boot stage of development. Thorough coverage is essential.

Phragmites: For partial control in Florida and those counties of states that border the Guif of Mexico, use 5 quarts per acre using broadcast spray equipment, or use a 2 percent solution applied by hand held equipment. For partial control in other areas of the U.S., use 3 quarts per acre using broadcast spray equipment or a 1 percent solution applied by hand held equipment. For optimum results, treat in late summer or fall, or when weeds are actively growing and in the full bloom stage of development. If treated before or after this stage, reduced control may result. The dense nature of the weeds and the uneven stages of growth may prevent good spray coverage; therefore, repeat treatments may be needed to maintain control. Visual control symptoms are slow to develop.

Quackgrass—In Annual Cropping Systems, or In Pastures and Sods Followed by Deep Tillage: Use 1 to 2 quarts of Glyphosate 4 per acre. If using the 1 quart rate: Apply 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre; do not tank mix with residual herbicides. If using the 2 quart rate: Apply treatment in 10 to 40 gallons of water per acre. To apply, wait until quackgrass is actively growing and is from 6 to 8 inches high. Do not till between harvest and fall applications, or in fall or spring prior to spring glyphosate treatments Wait a minimum of 3 days after treatment before tillage. For best results in pastures or sods, a moldboard plow should be used.

Quackgrass-Pasture or Sod or Other Noncrop Areas Where Deep Tillage Is Not Planned Following Application: Use 2 to 3 quarts of Glyphosate 4 in 10 to 40 gallons of water per acre Quackgrass should be higher than 8 inches tall and actively growing when treated. Do not till between harvest and fall applications, in fall or spring prior to spring glyphosate treatments. Wait a

minimum of 3 days after treatment before tillage

Redvine: For suppression, use 24 fluid ounces of Glyphosate 4 per acre at each of two applications 7 to 14 days apart, or a single application of 2 quarts of Glyphosate 4 per acre. Recommended rates should be applied in 5 to 10 gallons of water per acre, plus 0.5 to 1 percent nonionic surfactant by total volume. Apply to actively growing plants in September or early October, when plants are a minimum of 18 inches tall and have been growing 45 to 60 days since the last tillage. Apply treatments a minimum of 1 week before a killing frost.

Reed, giant: For control, use a 2 percent solution of Glyphosate 4 when plants are actively growing. For optimum results, apply in late summer to fall.

Smartweed, swamp: Use 3 to 5 quarts of Glyphosate 4 per acre when plants are actively growing, and when most have reached the early bud stage of development. Wait a minimum of 7 days after treatment before tillage.

Another option for control: Use 16 fluid ounces of Glyphosate 4 with 0.5 pound of 2.4-D active ingredient, plus 0.5 to 1 percent nonionic surfactant by total volume in 3 to 10 gallons of water per acre in late summer or fall. Treatments should be applied when weeds are actively growing and when the majority of plants have reached the early bud stage of development. Walt a minimum of 7 days after treatment before tillage. When using tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

\*Tatge, leafy: For suppression, use 16 fluid ounces of Glyphosate 4 with 0.5 pound of 2,4-D ingredient, plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons includer per acre in late summer or fall. Apply when plants are actively growing. If weeds have been mowed prior to treatment, apply when the majority of the weeds are 12 inches in height. Wait a minimum of 7 days after treatment before tillage. When using tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Starthistle, yellow: For best results, apply during periods of active growth, including the rosette, bolting, and early flower stages of development. When using "spray-to-wet" applications, apply Glyphosate 4 as a 2 percent solution. When using broadcast applications, use 2 quarts of Glyphosate 4 per acre in 10 to 40 gallons of water per acre.

Sweet Potato, wild: Thistle, artichoke: Using hand held equipment, apply Glyphosate 4 as a 2 percent solution when weeds are actively growing or are beyond the bloom stage of growth. Additional applications may be required. The weeds should be allowed to reach the recommended stage of development prior to retreatment. Wait a minimum of 7 days after treatment before tillage.

Thistie, Canada: Use 2 to 3 quarts of Glyphosate 4 per acre applied to actively growing thistles when the majority are at or beyond the bud stage of development. In the late summer or fall after harvest, killage, or mowing, allow a minimum of 4 weeks for initiation of active growth and rosette development before applying this product. If treating in fall, Glyphosate 4 must be applied before a killing frost. Wart a minimum of 3 days after treatment before tillage.

For suppression of Canada thistle, use 1 quart per acre of Glyphosate 4, or 1 pint of Glyphosate 4 plus 0.5 pound a.i. 2,4-0 per acre, plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre in the late summer or fall after harvest, mowing or tillage. Allow rosette regrowth to a minimum of 6 inches in diameter before treating, Applications can be made as Ping as leaves are still green and plants are actively growing at the time of application. Allow 3 or Pee days after application before tillage. When using tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Torpedograss: For partial control, use 4 to 5 quarts of Glyphosate 4 per acre. For applications to be effective, torpedograss must be actively growing, when the majority of weeds are at or beyond the seedhead stage of development. To maintain control, repeat applications are necessary. When applying in fall, treatments must be made before frost. Wait a minimum of 7 days after treatment before tillage.

Trumpetcreeper: For control, use 2 quarts of Glyphosate 4 per acre in 5 to 10 gallons of water per acre. Apply treatments in late September or October to actively growing plants that are a minimum of 18 inches in height and have been growing 45 to 60 days since the last tillage. Applications should be made a minimum of 1 week before a killing trost.

For other perennials listed on this label: Use 3 to 5 quarts of Glyphosate 4 per acre when perennial weeds are actively growing and most have reached early head or early bud stage of development. Wait a minimum of 7 days after treatment before tillage.

#### WOODY BRUSH AND TREES

When applying Glyphosate 4 as directed under the conditions described herein, this herbicide CONTROLS or PARTIALLY CONTROLS the woody brush, trees, and plants listed below.

For application instructions and a list of woody brush and trees controlled for industrial, Turf, Ornamental uses, see the section titled NON-CROP USES.

Alder

Alnus spp

Ash"

Fraxinus spp

Aspen, quaking Populus tremuloides

Bearmat (Bearclover)
Chamaebatia foliolosa

Beech Fagus grandifolia

Birch Betula spp.

Blackberry Rubus spp.

Błackgum Nyssa spp.

Bracken
Peridium spp

Broom:

French
Cytisus monspessulanus

Scotch
Cytisus scoparius

Buckwheat, California\*

Erlogonum fasciculatum

Cascera" Rhamnus purshiana

Catsclaw\*
Acacia greggi

Ceanothus\*
Ceanothus spp

Chamise

Adenostoma fasciculatum

Cherry:

Bitter Prunus emarginata

Black
Prunus serotina

r runus seronna

Prunus pensylvanica

Coyote brush
Baccharis consanguinea

Creeper, Virginia\* Parthenocissus quinquefolia

Rubus trivialis

Dogwood\*

Cornus spp.

Dewbarry

Elderberry

Sambucus spp.

Ulmus spp.

Eucalyptus

Eucalyptus spp

Gorse Ulex europaeus

Hasardia\* Haplopappus squamosus

Hawthorn Crateegus spp.

Hazel Corylus spp.

Hickory\* Carya spp

Holly, Florida / Brazilian Peppertree\*
Schinus terebinthifolius

Honeysuckle Lonicera spp.

Hornbeam, American\* Carpinus caroliniana

Kudzu
Puerana lobata

Locust, black\*
Robinia pseudoacacia

Madrone
Arbutus menziesii

Manzanita Arctostaphylos spp.

Maple

Red"
Acer rubrum

Sugar Acer saccharum

Vine\*
Acer circinatum

Monkey Flower\*

Öak:

Black\* Quercus velutina

Northern Pin Quercus palustris

Post Quercus stellata

Red Quercus rubra

Southern Red Quercus falcata

White'
Quercus alba

Persimmon\*
Diospyros spp.

Pine Pinus spp.

Poison Ivy Rhus radicans

Poison Oak Rhus toxicodendron

Poplar, yellow\* Linodendron tulipifera

Raspberry Rubus spp.

Redbud, eastern Cercis canadensis

Rose, multiflora Rosa multiflora

Russian-olive Elaeagnus angustifolia

Sage: black, white Salvia spp.

Sagebrush, California

Artemisia californica Salmonberry Rubus speciabilis

Salt cedar

Sassafras Sassafras arbidum

Sourwood
Oxydendrum arboreum

Surnac: Poison\* Rhus vernix

Smooth\*
Rhus glabra

Winged\*
Rhus copallina

Sweetgum
Liquidambar styraciflus

Swordfern\* Polystichum munitum

Tallowtree, Chinese Sapium sebiferum

Tan Oak
Lithocarpus densiflorus

Thimbleberry Rubus pervillorus

Tobacco, tree\*
Nicotiana glauca
Trumpetcreeper

Campsis radicans

Waxmyrtle, southern\* Myrica cerifera

Willow \_Salix spp

Partial control

\*\* See below for information on control or partial control

NOTE: Do not apply to brush that has been mowed or tilled or to trees that have been cut until regrowth has reached the recommended stages of development.

Glyphosate 4 should be applied when plants are actively growing and after full leaf expansion, unless otherwise directed. The higher rate of application should be used for larger plants and/or dense growth areas. On vines, use the higher rate for plants that have reached the woody stage of development. For optimum results, apply Glyphosate 4 in late summer or fall after fruit has formed.

Best results are obtained in arid areas when Glyphosate 4 is applied in spring to early summer, when brush species have a high moisture content and are flowering.

Thorough coverage is essential when using hand held equipment. Control symptoms may not appear before frost or senescence with fell applications.

Wall a minimum of 7 days after treatment before titlegs, mowing or removal. Additional treatments may be needed to control plants that regenerate from underground parts or seed. When applying on undestrable deciduous species, some autumn colors are acceptable as long as no major leaf drop has occurred. Reduced effectiveness may result if fall treatments are made after a frost.

Review the sections of this label litted DIRECTIONS FOR USE and MIXING, ADDITIVES, and APPLICATION INSTRUCTIONS for detailed application information.

To control or partially control the woody brush and trees listed below, apply. Glyphosate 4 as directed.

Alder; Dewberry; Honeysuckle; Post Oak; Raspberry: For control, use 3 to 4 quarts of Glyphosate 4 per acre applied as a broadcast apray, or as a 1 to 1.5 percent solution using hand held equipment.

Aspen, quaking; Cherry: bitter, black, pin; Hawthorn; Oak, southern red; Sweetgum; Trumpetcreeper: For control, use 2 to 3 quarts of Glyphosate 4 per acre applied as a broadcast spray, or as a 1 to 1.5 percent solution using hand held equipment.

Birch; Elderberry; Hazel; Salmonberry; Thimbleberry: For control, use 2 quarts of Glyphosate 4 per acre as a broadcast spray, or as a 1 percent solution using hand held equipment.

Blackberry: For control, use 3 to 4 quarts of Glyphosate 4 per acre as a broadcast spray, or 1 to 1.5 percent solution with hand-held equipment. Apply after plants have reached full leaf maturity. For best results, apply in late summer or fall. After berties have set or dropped in late fall, blackberry can be controlled by applying a 3/4 percent solution of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant by total spray volume with hand-held equipment. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 3 to 4 quarts of this product in 10 to 40 gallons of water per acre.

Broom: French, Scotch: For control, use hand held equipment to apply a 1.5 to 2 percent solution of Glyphosate 4.

Buckwheat, California; Hasardia; Monkey Flower; Tobacco, tree: For partial control, use hand held equipment to apply a foliar spray of a 1 to 2 percent solution of Glyphosate 4. Foliage must be thoroughly covered to obtain best results.

Catsclaw: For partial control, use a 1 to 1.5 percent solution of Glyphosate 4 applied by hand

Coyote Brush. For control, use hand held equipment and spray a 1.5 to 2 percent solution of Glyphosate 4 when at least 1/2 of the new leaves are at the full growth stage.

Eucalyptus: For controlling eucalyptus resprouts, use hand held equipment and spray a 2 percent solution of Glyphosate 4 when resprouts are 6 to 12 feet in height and plants are actively growing. Complete coverage is required. Avoid use on plants that are drought-stressed.

Kudzu: For control, use 4 quarts of Glyphosate 4 per acre applied as a broadcast spray, or use hand held equipment to apply a 2 percent solution. To maintain adequate control, additional applications will be necessary.

Madrone resprouts: For suppression or partial control, use a 2 percent solution of Glyphosate 4 applied to resprouts that are less than 3 to 6 feet tall. For optimum results, apply in spring or early

Maple, red: For control, use hand held equipment and apply a 1 to 1.5 percent solution of Glyphosate 4 when a minimum of 1/2 of the new leaves of the maple are fully developed. For partial control, use a broadcast spray of 2 to 4 quarts of Glyphosate 4 per acre

Maple, sugar; Oak, northern pin; Oak, red: For control, use hand held equipment and apply a 1 to 1.5 percent solution of Glyphosate 4 when a minimum of 1/2 of the new leaves are at the full development stage

on Ivy; Polson Oak: For control, use 4 to 5 quarts of Glyphosate 4 per acre applied as a adcast spray or, when using hand held equipment, use a 2 percent solution. To maintain adequate control, additional applications may be necessary. If applying in fall, treatments must be applied before leaves lose their green color

Rose, multiflora: For control, use 2 quarts of Glyphosate 4 per acre applied as a broadcast spray, or if using hand held equipment, apply a 1 percent solution. Treat multiflora rose before leaves begin to deteriorate from leaf-feeding insects.

Sage, black; Sagebrush, California; Chamise; Tallowtree, Chinese: For control, apply a 1 percent solution of Glyphosate 4 as a foliar spray with hand-held equipment. Thorough coverage is

Tan oak resprouts: For suppression or partial control, use a 2 percent solution of Glyphosate 4 applied to resprouts that are less than 3 to 6 feet tall. For optimum results, apply in fall

Willow: For control, use 3 quarts of Glyphosate 4 per acre applied as a broadcast spray, or if using hand held equipment, use a 1 percent solution

Other Trees and Woody Brush illsted on this label: For partial control, use 2 to 5 quarts of Glyphosate 4 per acre applied as a broadcast spray, or if using hand held equipment, use a 1 to 2 percent solution

### **NON-CROP USES**

Review the sections of this label titled GENERAL INFORMATION and MIXING, ADDITIVES, and PPLICATION INSTRUCTIONS for important information about Glyphosate 4. Review the owing NON-CROP sections for specific recommended use information

EXERCISE EXTREME CAUTION TO AVOID SPRAY CONTACT WITH THE FOLLOWING: FOLIAGE, EXPOSED NON-WOODY ROOTS OR GREEN STEMS; CROP FRUITS: DESIRABLE TURFGRASSES: SHRUBS; TREES: OR OTHER DESIRABLE VEGETATION, DESTRUCTION OR SEVERE DAMAGE MAY RESULT

Additional treatments may be needed to adequately control weeds that regenerate from seeds or underground parts

If multiple treatments are needed, use a maximum of 10.6 quarts of Glyphosate 4 per agre per year NOTE: THE MAXIMUM USE RATES DESCRIBED IN THIS LABEL APPLY TO GLYPHOSATE 4 WHEN COMBINED WITH ALL OTHER HERBICIDES CONTAINING THE ACTIVE INGREDIENTS GLYPHOSATE OR SULFOSATE—WHETHER APPLIED AS A MIXTURE OR APPLIED SEPARATELY. USERS MUST CAREFULLY CALCULATE ALL APPLICATION RATES AND MAKE SURE THAT TOTAL USAGE OF GLYPHOSATE 4 AND OTHER PRODUCTS CONTAINING GLYPHOSATE OR SULFOSATE DOES NOT EXCEED THE RECOMMENDED MAXIMUM USAGE RATES.

Glyphosate 4 does not provide residual control of weeds. Users should follow a label-approved herbicide program for subsequent weed control

Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used

#### INDUSTRIAL, RECREATIONAL, AND PUBLIC AREAS

When applied as directed under the NON-CROP USES section of this label, and under the corresponding conditions described. Glyphosate 4 provides control of those perennial and annual weeds described on this label, in areas such as the following

Airports

Fencerows

Ditch banks Petroleum tank farms and pumping installations

Parks

Railmads

Dry ditches

Dry canals Power and telephone rights-of-way

Roadsides Golf courses

Highways Schools industrial plant sites

Storage areas Lumber yards Utility substations

Other public areas and similar industrial or Parkino areas

Review the WEEDS CONTROLLED section of this label for application rates and other instructions for control of perennial weeds, annual weeds, trees and woody brush.

Recirculating sprayers, wiper applicators, or shielded applicators may be used to apply Glyphosate 4 on any non-crop area described herein. Review the SELECTIVE EQUIPMENT section of this label's APPLICATION EQUIPMENT AND TECHNIQUES section for equipment calibration and proper use information

#### TANK MIXTURES FOR INDUSTRIAL SITES AND FORESTRY SITE PREPARATIONS

#### Glyphosate 4 Plus OUST\*(or a registered generic alternative)

Use on industrial sites such as the following: Airports, industrial plants, lumberyards, petroleum tank farms, pumping stations, railroads, roadsides, storage areas and other similar sites where bare ground is desired.

The Glyphosate 4 plus Oust mixture may also be used as a site preparation treatment for sites to be planted with the following: Jack pine, lobfolly pine, red pine, slash pine, and Virginia pine. When applied as directed herein for NON-CROP USES under the conditions described, Givenosate 4 plus Quat controls annual weeds listed in the WEEDS CONTROL! ED sections of the label for this product and Oust, and controls or partially controls the perennial weeds listed

Make applications of 1 to 2 quarts of Gtyphosate 4 with 2 to 4 ounces of Oust in 10 to 40 gallons of spray solution per acre as a broadcast spray to weeds that are actively growing

A Glyphosate 4 plus Oust mixture may be applied by aerial equipment in site prep operations. When applying aerially, use the recommended rates in 5 to 15 gallons of spray solution per acre

Do not apply this product plus Oust tank mixtures by air in California

For controlling annual weeds, use the lower rates of Glyphosate 4 and Oust. For control of the perennial weeds listed herein, use the higher rates of both products. For partial control, use the lower listed rates

Bahiagrass

Paspalum notatum

Bermusaorass'

Cyrinden dactylon

Broomsedge

Andropogon virginicus

Dock, curly

Rumex crispus

Dogfennel

Funatorium capilliforium

Fescue, tall

Festuca arundinacea

Johnsongrass\*\*

Sorghum halepense

Poorjoe\*\*

Diodia teres

Quackgrass

Agropyron repens

Trumpetcreeper\* Campsis radicans

Vasevorass

Paspalum urvillei

Vervain, blue Verbena hastate

- Suppression at higher rates only.
- " Control at lower rates

Review and carefully observe all cautionary statements and other information appearing on the labels of all of the herbicides used

#### TANK MIXTURES FOR NONCROP SITES

When applied as tank mixtures. Glyphosate 4 controls emerged annual weeds and partially controls emerged perennial weeds listed in this label. When applying as a tank mixture, the residual herbicides listed below (or their registered generic aquivalents) will provide preemergence control of those weeds listed in the individual herbicide product labels.

- Glyphosate 4 with DIURON
- · Glyphosate 4 with KROVAR™ I
- · Glyphosate 4 with KROVAR II Glyphosate 4 with RONSTAR™ 50WP
- Glyphosate 4 with SIMAZINE, PRINCEP™ CALIBER™ 90
- Glyphosate 4 with SIMAZINE 4L
- Glyphosate 4 with SIMAZINE 80W Glyphosate 4 with SURFLAN® 75W
- Glyphosate 4 plus ORYZALIN 4 A.S.

When using residual herbicides in tank mixtures, add an agriculturally approved nonionic surfactant at the rate of 0.5 to 1 percent by volume of spray solution. Review the MIXING, ADDITIVES and APPLICATION INSTRUCTIONS portion of this label prior to preparing these tank

Review and carefully observe all label claims, cautionary statements, recommended usage rates and all other information on the labels of all of the products used in these mixtures. Use the most rictive label directions for each product in the mixture.

#### TROL OF EMERGED WEEDS

NOTE: Review this label's HAND HELD AND HIGH VOLUME EQUIPMENT section for recommended rates when using handoun or back sprayer equipment

Annual Weeds: Use 1 quart of Glyphosate 4 per acre in these tank mixtures when weeds are smaller than 6 inches in height, and 1.5 quarts of Glyphosate 4 per acre when weeds are higher than 6 inches

Perennial Weeds: For partial control using these tank mixtures, use 2 to 5 quarts of Glyphosate 4 per acre. Review and follow the recommendations listed in this label's WEEDS CONTROLLED section for rate of application and stage of growth information specific to

#### PRE-EMERGENCE WEED CONTROL

Review individual product labels for specific rates, carrier volumes, specific non-crop sites, and precautionary statement information applicable to pre-emergence weed control.

Mix only the quantity of soray solution that is to be used that same day. These tank mixtures should not be permitted to stand overnight-reduced weed control may result.

### INDUSTRIAL, TURF, AND ORNAMENTAL USE RECOMMENDATIONS

AVOID CONTACT WITH FOLIAGE, GREEN STEMS AND EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES AS SEVERE INJURY OR DESTRUCTION JKELY

Detailed instructions are provided below by site

Applications may be made to control any weeds listed in the annual, perennial and woody brush tables, unless otherwise stated. In addition refer to the SELECTIVE EQUIPMENT section of this

#### APPLICATION RATES

APPLICATION	AMOUNT OF GLYPHOSATE 4	SPRAY VOLUME GALLONS / ACRE
Soray-To-Wet		
Handgun or Backpack	1 – 4 Percent by Volume ***	Spray-to-Wet *
Low Volume Directed Spray		
Backpack	9 – 18 Percent by Volume ***	15 to 25 **
Modified High Valume	3.5 to 7 Percent by Volume ***	40 to 60 **

For applications made on a spray-to-wet basis, spray coverage should be complete and uniform. Do not spray to the point of runoff.

#### CUT STUMPS

Use Glyphosate 4 to control woody vegetation by applying to freshly cut stumps or resprouts of undestrable trees. Treatment of cut stumps may be made on any site listed on this label. Use suitable application equipment to ensure coverage of the entire cambium. Trees or resprouts must be cut close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly-cut surface immediately after cutting, as delays in application may result in reduced performance Applications should be made during periods of active growth and full leaf expansion to ensure optimum results

DO NOT TREAT CUT STUMPS IF THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO OR SHARE THE ROOTS OF THE CUT STUMP. Some sprouts, stems, or trees may share the same root system. Adjacent trees of similar age, height and spacing may have 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.

Glyphosate 4, when used according to instructions for cut stump applications, will CONTROL, PARTIALLY CONTROL, or SUPPRESS many types of tree species and woody brush. Some of these species are as follows:

Ainus spp.

**Fucaivotus** Eucalyptus spp.

Madrone

Arbutus menziesii

Quercus son

Reed, giant Arundo donax

Saltcedar

Tamarisk soo

Sweetgum

Liquidambar styraciflua

Tan Oak

Lithocarpus densifiorus

Willow

Salix soo.

#### **FORESTRY SITE PREPARATION**

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

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.

See APPLICATION RATES table in HAND-HELD EQUIPMENT section of this label for applications using different types of equipment.

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

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

Use any recommended rate of this product in a tank mix with the following products (or their registered generic equivalents) for forestry site preparation.

PRODUCT	BROADCAST RATES
Arsenal Applicators Concentrate	2 - 16 fluid oz. / scre
Escort*	0.5 - 3.5 oz. / scre
Chopper™	4 – 32 fluid oz. / acre
Garton 4	1 – 4 qts. / acre
Oust*	1 – 4 oz. / acre
	SPRAY TO WET RATES
Arsenal Applicators Concentrate	0.03 - 0.5 percent by volume
	LOW VOLUME DIRECTED SPRAY RATES
Arsenal Applicators Concentrate	0.1 - 0.5 percent by volume

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

Do not apply this product as an over-the-top broadcast spray for forestry conifer or

<sup>\*\*</sup> For low volume directed spray applications, coverage should be uniform with a minimum of 50 to 75 percent of the foliage contacted. Coverage of the top one-half of the plant is critical for best results. Low volume directed applications with backpacks work best when treating weeds and brush that do not exceed 10 feet tall. For taller brush and weeds, high volume handguns may be modified by reducing nozzle size and spray pressure to produce a low volume directed spray. To ensure adequate spray coverage, spray both sides of large or tall woody brush and trees, when foliage is dense and thick, or where there are multiple sprouts. To achieve best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop.

<sup>\*\*\*</sup> For example, to make a 1 percent solution, use one gallon of Glyphosate 4 plus 99 gallons of water. Use four gallons plus 96 gallons for a 4 percent solution, etc.

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## **GLYPHOSATE 4**

#### GENERAL NON-CROP AREAS AND INDUSTRIAL SITES

This product may be used in areas such as airports; apartment complexes; Christmas tree farms; dtich banks; dry ditches; dry canals; fencerows; golf courses; industrial sites; lumber yards; manufacturing sites; office complexes; ornamental nurseries; parks; parking areas; petroleum tank farms and pumping installations; railroads; recreational areas; residential areas; roadsides; sod or turf seed farms; schools; storage areas; substations; warehouse areas; other public areas; and similar industrial and non-crop sites.

Grazing Restrictions: Glyphosate 4 may be used to treat undesirable vegetation in rights-of-way that pass through pastures, rangeland and forestry sites that are being grazed. For use in tank mix applications, comply with all restrictions appearing on the tank mix product labels.

There are no grazing restrictions for the following labeled applications of Glyphosate 4:

- Where the spray can be directed onto undesirable woody trees and brush, such as in handgun spray-to-wel or low volume directed spray treatments.
- · For tree injection or frill applications and for treatments on cut stumps.

For broadcast applications, observe the following restrictions:

- For application rates of greater than 6 but less than 10 quarts per acre, no more than 15 percent of the available grazing area may be treated.
- For application rates of no more than 6 quarts per acre, no more than 25 percent of the available orazing area may be treated.
- All restrictions outlined above apply to lactating dairy animals. No other restrictions apply to ating dairy animals.

These recommendations do not apply to rangeland outside of rights-of-way.

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

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

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

TANK MIXTURES: This product may be used in tank mixes with the following products (or their registered generic equivalents) if the tank mix product is registered for use on such non-crop sites. Refer to the tank mix product's labels for approved non-crop sites and application rates.

Arsenai™ Pendulum™ 3.3 EC Barncade™ 65WG Pendulum WDG Plateau™ Clarity Princep™DF Diuron Princep™ Liquid Ronstar™ 50WP Endurance™ Escort Garlon™ 3A Sahara™ Garlon 4 Simazine Spike 80DF Hyvar X ırmex™ DF Surflan\* .ovar™ LDF Telar™ Manage<sup>4</sup> Vanquish \*\*

Do not apply this product with dicamba tank mixtures by air in California

### Brush Control Tank Mixtures

Tank mixtures of Glyphosate 4 may be used to increase the spectrum of control for herbaceous weeds, trees, and woody brush. When tank mixing, read and carefully observe all label claims, cautionary statements and information on the labels of all products used in the mixture. Use according to the most restrictive precautionary statements for each product. Any recommended rate of this product may be used in a tank mix as stated in this label.

For controlling herbaceous weeds, the lower recommended tank mixture rates should be used. For controlling dense stands or tough-to-control woody brush and trees, the higher recommended rates should be used.

NOTE: For side trimming treatments, this product should be used alone or in tank mixture with Garlon 4 (or a registered generic equivalent). For all products listed in the chart below, registered generic equivalents may also be used

PRODUCT	BROADCAST RATES
Arsenal 2WSL	6 - 32 fluid oz. / acre
Escort	1 - 2 oz. / acre
Garlon 3A*, Garlon 4	1 – 4 qts. / acre
	SPRAY TO WET RATES
Arsenal 2WSL	0.06 - 0.12 percent by volume
Escor!	1 – 2 oz. / acre
	LOW VOLUME DIRECTED SPRAY RATES
Arsenal 2WSL	0.1 - 0.5 percent by volume
Eschrt	1 – 2 oz. / acre

\* Ensure that Garlon 3A (or a registered generic equivalent) is mixed thoroughly with water in accordance with label directions before adding Glyphosate 4. Spray mixture must be agriating when this product is added to avoid spray compatibility problems.

#### Chemical Mowing - Perennials

Glyphosate 4 will suppress perennial grasses listed in this section to serve as a substitute for mowing. When treating tall fescue, fine fescue, orchardgrass, quackgrass or reed canarygrass covers, use 8 fluid cunces of this product per acre. When treating Kentucky bluegrass, use 6 fluid cunces of this product per acre. Apply these treatments in 10 to 40 gallons of spray solution per acre.

Use only where some temporary injury or discoloration of perennial grasses can be tolerated

#### Chemical Mowing - Annuals

For growth suppression of annual grasses such as annual ryegrass, wild barley and wild oats growing in coarse turf in industriat areas or on roadsides, apply 4 to 5 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Make applications when annual grasses are actively growing and before seedheads are in the boot stage of development. Note that treatments may injure the desired grasses.

#### Bromus Species and Medusahead in Pastures and Rangelands

Bromus species. Glyphosate 4 may be used to treat downy brome (Bromus tectorum), Japanese brome (Bromus japonicus), soft chess (Bromus mollis) and cheatgrass (Bromus secalinus) found in industrial sites, rangeland and pastures. Apply 8 to 16 fluid ounces of Glyphosate 4 per acre on a broadcast basis.

Treatment should coincide with early seedhead emergence of the most mature plants for best results. Delaying application until this growth stage will maximize the emergence of other weedy grass flushes. Apply Glyphosate 4 to the same site each year until seed banks are depleted and the desirable perennial grasses become reestablished on the site.

Medusahead. For treating medusahead, apply 16 fluid ounces of Glyphosate 4 per acre as soon as plants are actively growing, and prior to the 4-leaf stage. Apply in the fall or spring

Use ground or aerial equipment when applying to brome and medusahead. Use fixed wing or helicopter equipment when applying by air, and apply in 2 to 10 gallons of water per acre. When using ground equipment, apply in 10 to 20 gallons of water per acre. When applied in accordance with this label, there are no grazing restrictions.

### **Dormant Turfgrass**

Glyphosate 4 may be used to control or suppress many winter annual weeds and tall fescue for effective release of dormant Bermudagrass and bahiagrass turf. Apply only when turf is dormant and before spring greenup.

Apply 8 to 64 fluid ounces of Glyphosate 4 per acre. Apply the recommended rates in 10 to 40 gallons of water per acre. Use only in areas where some temporary injury or discoloration can be tolerated and where Bermudagrass or bahlagrass are desirable ground covers.

Applying treatments in excess of 16 fluid ounces per acre may cause injury or delayed greenup in highly maintained areas, such as golf courses and lawns. DO NOT apply tank mixtures of Glyphosate 4 plus Oust or Outrider in highly maintained turfgrass areas. For further uses, refer to the ROADSIDES section below, which provides rates for treating dormant Bermudagrass and bahiagrass.

## **Actively Growing Bermudagrass**

Glyphosate 4 may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. In highly maintained turfgrass areas, DO NOT apply more than 16 fluid ounces of this product per acre, and OO NOT apply tank mixtures of this product plus Oust. For additional uses, refer to the ROADSIDES section below, which gives rates for actively growing Bermudagrass treatments. Use only in areas where temporary injury or discoloration can be tolerated.

#### Turfgrass Renovation, Seed, or Sod Production

Use Glyphosate 4 to control most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, determine if any regrowth has occurred from escaped underground plant parts before planting or sodding. Where repeat treatments are necessary, ensure that sufficient regrowth has occurred prior to application. Summer or fall applications provide the best control for warm-season grasses such as Bermudagrass. If existing vegetation is growing under mowed turfgrass management, apply Glyphosate 4 after omitting a minimum of one regular mowing to allow sufficient growth for good interception of the soray.

Before treatment, do not disturb soil or underground plant parts. Delay tillage or renovation techniques such as vertical mowing, coring or slicing for 7 days after application to allow translocation into underground plant parts.

Desirable turfgrasses may be planted once the above procedures have been followed

For instances of unwanted vegetation growing in existing turfgrass, hand-held equipment may be used for spot treatment. To control sod remnants or other unwanted vegetation after sod is harvested, broadcast or hand-held equipment may be used.

Do not feed or graze turfgrass grown for seed or sod production for 8 weeks after applying this product

#### DORMANT RANGELAND

Glyphosate 4 controls or suppresses many weeds in dormant rangeland, including the following: Downy brome, cheat grass, cereal rye, medusahead rye and jointed goatgrass.

in early spring when weeds have greened up but desirable grasses (such as crested and tall wheatgrass) are still truly dormant, apply Glyphosate 4 at the rate of 8 to 16 ounces per acre.

Some slight discoloration of the desirable grasses may result, but they will regreen and regrow under moist soil conditions as the effects of Glyphosate 4 dissipate.

For dormant rangeland applications, do not use additional surfactant or ammonium sulfate.

#### HABITAT MANAGEMENT

#### Habitat Restoration and Maintenance

Use Glyphosate 4 to control exotic and other undesirable vegetation in habitat management and natural areas, including rangeland and wildlife refuges. Treatments can be made to allow recovery of native plant species, before planting desirable native species, and for similar broad-spectrum vegetation control requirements. Use spot treatments to selectively remove unwanted plants for habitat management and enhancement. However, extreme care should be taken to ensure Glyphosate 4 does not contact desirable plants.

#### Wildlife Food Plots

'st \_phosate 4 may be used as a site preparation treatment prior to planting wildlife food plots. Users may plant any wildlife food species after applying this product, or native species may be allowed to repopulate the area. If tillage is necessary to prepare a seedbed, wait 7 days after application before tillage to facilitate translocation into underground plant parts.

#### INJECTION AND FRILL (WOODY BRUSH AND TREES)

Use Glyphosate 4 to control woody brush and trees by injection or frill applications. When applying this product, use suitable edulpment that penetrates into the living tissue. Use the equivalent of 0.4 fluid ounce (1 ml) of Glyphosate 4 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 Glyphosate 4 either to a continuous frill around the tree or as cuts that are evenly spaced around the tree and below all branches. As a tree's diameter increases in size, apply diluted material to a continuous frill or more closely spaced cuttings for better results. Do not use application techniques that allow runoff to occur from frilled or cut areas in species that exude sap freely. In species such as this, use a 100 percent concentration of this product and make the frill or cuts at an oblique angle to produce a cupping effect. For best results, make applications during periods of active growth and after full leaf expansion.

## ORNAMENTALS, PLANT NURSERIES, AND CHRISTMAS TREES

UNLESS OTHERWISE SPECIFIED, THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES. Exercis≱ care to avoid contact of spray, drift or mist with foliage or green bark of established ornamental

#### Rinst-Directed, Trim-and-Edge

""When applied as instructed herein, Glyphosate 4 controls undesirable vegetation listed on this label prior to planting, within and around greenhouses and shadehouses, and as a post directed spray around Christmas trees

Glyphosate 4 can be used as a post-directed spray around established woody ornamental species, including arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, hollies, jojoba, Illac, magnolia, maple, oak, pine, poplar, privet, spruce and yew. Glyphosate 4 is also effective when used to trim and edge around trees, buildings, roads and sidewalks, potted plants and other objects in nursery settings.

Review the WEEDS CONTROLLED sections of this label for specific instructions and rates of application for controlling various perennial and annual weeds. For Christmas trees, if making multiple applications, do not use more than 10.6 quarts of Glyphosate 4 per acre per year.

NOTE: Protect desirable plants from the spray solution by using shields or coverings made of impermeable material, such as cardboard.

#### Site Preparation

Use Glyphosate 4 prior to planting any ornamental, nursery or Christmas tree species. Exercise extreme caution to keep spray off nontarget plants during site preparation applications.

#### Wiper Applications

Glyphosate 4 may be applied through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established eucalyptus or poplar trees. Review the SELECTIVE EQUIPMENT section of this label for additional information about the correct use of wiper applicators

#### Greenhouse/Shadehouse

Control weeds growing in and around greenhouses and shadehouses by using Glyphosate 4. When doing so, turn off air circulation fans, and remove desirable vegetation prior to application.

#### SILVICULTURAL SITES AND RIGHTS-OF-WAY

OO NOT USE GLYPHOSATE 4 AS AN OVER-THE-TOP BROADCAST SPRAY IN SILVICULTURAL NURSERIES

When applied as directed for NON-CROP USES under the conditions described herein, Glyphosate 4 will control the undesirable vegetation fisted on this label. Glyphosate 4 will also suppress or control the undesirable vegetation fisted on this label when it is applied at the recommended rates for release of established conferous species listed on this label.

See the WEEDS CONTROLLED sections of this label for specific rates of application and instructions for controlling various brush, annual and perennial weeds. See the Conifer Release part of this section of the label for specific rates of application for release of listed coniferous species.

Do not apply more than 10.6 quarts of Glyphosate 4 per acre per year where repeat applications are necessary.

#### Aerial Application

For silvicultural site preparation, conifer release and rights-of-way treatments, this product may be applied using aerial spray equipment. Review the <u>APPLICATION EQUIPMENT AND TECHNIQUES</u> part of the <u>MIXING</u>, <u>ADDITIVES</u>, <u>AND APPLICATION INSTRUCTIONS section of this label for detailed information on how to apply this product aerially.</u>

DO NOT APPLY THIS PRODUCT BY AIR TO RIGHT-OF-WAY SITES IN CALIFORNIA.

#### Site Preparation

After preplant applications of Glyphosate 4, any silvicultural species may be planted.

#### Postdirected Spray

Use as a spray on the foliage of undesirable vegetation in established silvicultural sites. Exercise care to avoid contact of spray, mist or drift with foliage or green bark of desirable species.

#### Conifer Release

For conifer release, apply only where conifers have been established for a period of one year or more. Do not disturb vegetation prior to treatment or until visual symptoms appear after application. Symptoms of treatment are slow to appear, especially in woody species that have been treated in late fall. Injury may occur to conifers that have been treated for release, especially where spray patterns overlap, where the higher rates are applied, or when applications are made during periods of active conifer growth. For conifer release applications, do not use additional autfactant.

Make applications after formation of final conifer resting buds in the fall, or prior to initial bud swelling in the spring. Some autumn colors on undesirable deciduous species are acceptable so long as no major leaf drop has occurred. Use the rates listed below for conifer release to control or partially control those weeds described in the WEEDS CONTROLLED sections of this label

For release of the conifer species listed below:

Douglas Fir

Pseudotsuga menziesii

Fir

Abies sop

Hemlock

Tsuga spp.

Pines\*

Pinus spp.

Spruce

Picea spp.

\*Includes all species except eastern white pine, slash pine, or loblolly pine

Apply 1.5 to 2 quarts of Glyphosate 4 per acre except for west of the crest of the Cascade Mountains in Washington and Oregon. When applying in spring west of the crest of the Cascade Mountains, apply 1 quart of Glyphosate 4 per acre prior to conifer bud swell for controlling annual weeds. When applying in fall west of the crest of the Cascade Mountains in Washington and Oregon, apply 1 to 1.5 quarts of this product per acre prior to any major leaf drop of deciduous species.

Apply 1 quart of this product per acre for release of western hemlock.

For release of these conifer species:

Loblolly pine
Pinus taeda

Eastern white pine Pinus strobes

Slash pine

Pinus elliottii

## Late Season Application

During early autumn, apply 1.5 to 2 quarts of Glyphosate 4 in at least 5 gallons of spray solution per acre. Applying before September 1 or when conditions are conductive to rapid growth of conifers will create the possibility of increased injury in the form of needle and/or tip burn. Injury may decrease with later applications. Some autumn colors are acceptable at the time of treatment. Treat before frost or leaf drop of undesirable plants. Applications made in accordance with label directions will release loblolly pine, slash pine and eastern white pine by reducing competition from the following species:

## 18135

## **GLYPHOSATE 4**

Ash Fraxinus spp Cherry Black Prunus serotina Pir Prunus pensylvanica Elm Ulmus sop Hawthorn Crataegus spp Locust black Robinia pseudoacacia Manie red Acer rubre Oak Alack Quercus velutina 051ء. Quercus stellata Southern Red Quercus falcate White Quercus alba Persimmon Diospyros spp Poplar, yellow Liriodendron tulipifera Sassafras Sassafras albidum Sourwood Oxydendrum arboretum Sumac Poison Rhus vernix Smooth Rhus glabra Winged Rhus conallina Sweetgum Liquidambar styraciflua

Treat only the sites where woody brush and trees listed in this label make up the majority of the undesirable species.

### Conifer Release From Herbaceous Weeds: Glyphosate 4 Plus Oust Tank Mixtures

To release loblolly plnes from herbaceous weeds, tank mixtures of Glyphosate 4 plus Oust (or a registered generic alternative) will control annual weeds listed in the WEEDS CONTROLLED sections of this and the Oust label, and will partially control those perennial weeds that are listed below.

Mix and apply 16 to 24 fluid ounces of Glyphosate 4 with 2 to 4 ounces of Oust in 10 to 30 gallons of spray solution per acre. Apply to weeds that are actively growing as a broadcast spray over the top of the young loblolly pines.

If desired, this tank mixture may be applied using aerial equipment. When using aerial equipment, use the recommended rate in 5 to 15 gallons of spray solution per acre.

Do not apply Glyphosate 4 plus Oust tank mixtures by air in California.

For controlling the annual weeds listed below that are 12 inches in height (or runner length on annual vines), use the lower rates of both Glyphosate 4 and Oust. When annual weeds are in more advanced stages of growth and are approaching flower or seed formation, use the higher rates of both products.

Use the higher rates of both products for partial control of the perennial weeds listed below. Use the lower rates to suppress growth.

Bahiagrass
Paspalum notatum

Broomsedge Andropogon virginicus Dock, curty Rumex crispus

Doglennel
Eupatorium capilliforium

Fescue, tall Festuca arundinacea

Johnsongrass\*
Sorghum halepense

Poorjoe\*
Diodia teras

Trumpetcreeper\*\*

Camosis radicans

Vaseygrass Paspalum urvillei

Vervain, blue

Provides control at higher rates.

\*\* Provides suppression only at higher rates.

If treatment takes place when young trees are under stress from drought, flood water, insects or disease, pine damage may occur or can be accentuated.

Review and carefully observe the cautionary statements and all other information appearing on the labels of all of the herbicides used.

NOTE TO USER: Do not use Glyphosate 4 in areas where adverse impact on federally designated endangered or threatened plants or aquatic species is likely.

Before treatment, users must determine that no such species are located in or immediately adjacent to the area of application.

#### PARKS, RECREATIONAL AND RESIDENTIAL AREAS

Glyphosate 4 may be applied in parks, recreational and residential areas using any application equipment described in this label. It may be used to trim-and-edge around trees, paths, fences, and around buildings, sidewalks, and other objects. This product may be used for unwanted vegetation, and may be used to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to laying asphalt or beginning construction projects, or prior to planting an area to ornamentals, flowers, or turfgrass (sod or seed).

All of the instructions in the section titled GENERAL NON-CROP AREAS AND INDUSTRIAL SITES apply to park and recreation areas.

#### RAILROADS

All of the instructions in the section titled GENERAL NON-CROP AREAS AND INDUSTRIAL SITES apply to railroads.

#### Bare Ground, Ballast and Shoulders, Crossings, Spot Treatments

Use Glyphosate 4 to maintain bare ground on railroad baltast and shoulders. Repeat applications of this product may be needed, as weeds emerge, to maintain bare ground. Glyphosate 4 may also 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. Use up to 80 gallons of spray solution per acre for crossing applications

TANK MIXTURES: Tank mix Glyphosate 4 with the following products (or their registered generic equivalents) only if the specific product is registered for ballast, shoulder, spot, bare ground and crossing treatments:

	······································	
Arsenal	Krovar I	ļ
DFClarity	Qust	
Diuron	Sahara	
Escort	Spike™	
Garlon 3A	Telar	
Garlon 4	Vanguish	
Hyvar™ X	2,4-D	

#### Brush Control

Control woody brush and trees on railroad rights-of-way by applying Glyphosate 4 as follows: Apply 4 to 10 quarts of this product per acre as a broadcast spray, using boom-type or boomless nozzles. A maximum of 80 gations of spray solution per acre may be used. Apply a 0.75 to 2 percent solution of Glyphosate 4 when using high-volume spray-to-wet applications. When using low volume directed sprays for spot freatment, apply a 5 to 10 percent solution of this product

TANK MIXTURES: For enhanced control of woody brush and trees, mix Glyphosate 4 with the following products (or their registered generic equivalents):

Arsenal	Garion 4		
Escort	Tordon™ K		
Garlon 3A			

#### Bermudagrass Release

Glyphosate 4 may be used for control or partial control of many annual and perennial weeds for effective release of actively growing Bermudagrass. Mix 1 to 3 pints 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 grow or as they approach flower or seedhead formation. Applying Glyphosate 4 at these rates will also provide partial control of the following perennial species:

	Bahiagrass	Johnsongrass	
-	Bluestem, silver	Trumpetcreeper	1
	Fescue, tall	Vaseygrass	[

TANK MIXTURES: Glyphosate 4 may be tank mixed with Oust (or a registered generic equivalent) by mixing no more than 1 to 3 pints of this product with 1 to 2 ounces of Oust per acre. 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 lower rates of each product. The higher rates should be used as annual weeds increase in size and as they approach the flower or seedhead stages. These rates also provide partial control of these perennial weeds:

Bahiagrass			Fescue, tall
Blackberry			Johnsongrass
Bluestern, silver			Poorjoe
Broomsedge			Raspberry
Dallisgrass			Trumpetcreeper
Dewberry		5	Vaseygrass
Dock, curly	•		Vervain, blue
Dogfennel			

Use this product only on welf-established Bermudagrass. Although Bermudagrass injury may result from the treatment, regrowth will occur under moist conditions. Do not repeat applications in the same season as severe injury may occur.

#### ROADSIDES

All of the instructions provided in the GÉNERAL NON-CROP AREAS AND INDUSTRIAL SITES section apply to roadsides.

TANK MIXTURES: Glyphosate 4 may be tank mixed with the following products (or their registered generic equivalents) if the specific product is registered for shoulder, guardrail, spot and bare ground treatments:

Princep Liquid
Ronstar 50WP
Sahara
Simazine
Surflan
Teler
Vanquish
2,4-D

Refer to the GENERAL NON-CROP AREAS AND INDUSTRIAL SITES section of this label for general tank mixing instructions.

#### Shoulder Treatments

Glyphosate 4 may be used on road shoulders using boom sprayers, shielded boom sprayers, highvolume off-center nozzles, hand-held equipment and similar equipment.

#### Guardrails and Other Obstacles to Mowing

Use Glyphosate 4 to control weeds growing under guardrails and around signposts and other objects along the roadside.

#### Spot Treatment

Use Glyphosate 4 as a spot treatment to control-inwanted vegetation growing along roadsides.

### Release of Bermudagrass or Bahlagrass

### Dormant Applications

Glyphosate 4 may be used to control or partially control tall fescue and many winter annual weeds for effective release of dormant Bermudagrass or bahiagrass. Apply only when turf is dormant and before spring greenup. This product may also be tank-mixed with Oust or Outrider for residual control. NOTE: Tank mixtures of this product with Oust may delay greenup.

To obtain best results on winter annuals, apply when plants are in an early growth stage (below 6 inches in height) after most have germinated. To obtain best results on tall fescue, apply when fescue is at or beyond the 4- to 6-leaf stage.

Apply 8 to 64 fluid ounces of Glyphosate 4 in a tank mixture with 0.75 to 1.3 ounces of Outrider herbicide per acre. Read and observe all label directions for Outrider herbicide.

Apply 8 to 64 fluid ounces of Glyphosate 4 per acre elone or in a tank mixture with 0.25 to 1 ounce per acre of Oust. Apply recommended rates in 10 to 40 gallons of water per acre. This product should only be used in areas where Bermudagrass or bahlagrass are desirable ground covers, and where some temporary injury or discoloration can be tolerated. To minimize injury and to avoid delays in greenup, add no more than 1 ounce of Oust per acre on Bermudagrass and no more than 0.5 ounce of Oust per acre on bahlagrass. Avoid treatments when these grasses are in a semi-dormant condition.

#### **Actively Growing Bermudagrass**

Use Glyphosate 4 to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. Apply 1 to 3 pints of Glyphosate 4 in 10 to 40 gallons of spray solution per acre. The lower rate should be used when treating annual weeds below 6 lower loss in height (or runner length). The higher rate should be used as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the perennial species listed below:

Bahiagrass	Johnsongrass
Bluestern, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

TANK MIXTURES: Glyphosate 4 may be tank mixed with Outrider to control or partially control Johnsongrass and other weeds listed on the Outrider label, Mix and apply 8 to 32 fluid ounces of this product with 0.75 to 1.3 ounces of Outrider. The higher rates of both products should be used to control perennial weeds or annual weeds greater than 6 inches in height.

Glyphosate 4 may be tank mixed with Oust. If tank-mixed, do not exceed 1 to 2 pints of this product with 1 to 2 ounces of Oust per acre. The lower rates of each product should be used to control those annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust label. The higher rates should be used as annual weeds increase in size and as they approach the flower or seedhead stages. These rates will also provide partial control of the perennial weeds listed below:

Fescue, tall
Johnsongrass
Poorjoe
Trumpetcreeper
Vaseygrass
Vervain, blue

Use only on Bermudagrass that is well-established. However, Bermudagrass injury may result from treatment, but regrowth will occur under moist conditions. Do not repeat applications of the lank mix in the same season as severe injury may occur.

#### Actively Growing Bahlagrass

To suppress vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 6 fluid ounces of Glyphosate 4 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 approximately 3 to 4 inches. This application must be made before seedhead emergence.

For suppression up to 120 days, apply 4 fluid ounces of this product per acre, then apply 2 to 4 fluid dunces per acre approximately 45 days later. Do not exceed 2 applications per year.

TANK MIXTURES: Glyphosate 4 may be used to control or partially control Johnsongrass and other weeds listed on the Outrider label in actively growing bahlagrass. Mix and apply 1.5 to 5 fluid ounces of Glyphosate 4 with 0.75 to 1.3 ounces of Outrider per acre. The higher rates should be used for control of perennial weeds or annual weeds that exceed 6 inches in height. Use only on bahlagrass that is well-established.

A tank mixture of Glyphosate 4 plus Oust may be used. Mix and apply 6 fluid ounces of this product plus 0.25 ounce of Oust per acre 1 to 2 weeks after an initial spring mowing. Do not exceed one application per year.

#### UTILITY SITES

Glyphosate 4 is recommended for use along electrical power, pipeline and telephone rights-of-way, and also in other sites associated with these rights-of-way, including substations, roadsides, railroads or similar rights-of-way that run in conjunction with utilities.

Glyphosate 4 may be used in preparing or establishing wildlife openings within utility sites, maintaining access roads, and for side trimming along utility rights-of-way.

TANK MIXTURES: Glyphosate 4 used in tank mixtures increases the spectrum of control for herbaceous weeds, woody brush and trees, <u>IMPORTANT</u>: When tank mixing, read and carefully observe all label claims, cautionary statements and other information on the labels of all products used. Products should be used according to the most restrictive precautionary statements for each product in the mixture. Any recommended rate of Glyphosate 4 may be used in a tank mix.

Use the lower recommended tank mixture rates for control of herbaceous weeds. Use the higher recommended rates for control of dense stands or tough-to-control woody brush and trees. For all products listed in the chart below, registered generic equivalents may also be used.

NOTE: For side trimming treatments, this product should be used alone or in tank mixture with Garlon 4.

PRODUCT*	BROADCAST RATE	USE SITES
Arsenal 2WSL	6 – 32 fluid oz. / acre	Utility Sites
Escort	1 - 2 oz. / acre	Utility Sites
Garlon 3A**, Garlon 4	1 – 4 quarts / acre	Utility Sites / Side Trimming
Oust	1 – 4 oz. / acre	Utility Sites
	SPRAY TO WET RATES	USE SITES
Arsenal 2WSL	0.06 - 0.1 percent by volume	Utility Sites
Escort	1 - 2 oz. / acre	Utility Sites
	LOW VOLUME DIRECTED SPRAY RATES	USE SITES
Arsenal 2WSL	0.1 - 0.5 percent by volume	Utility Sites
Escort	1 - 2 oz. / acre	Utility Sites

<sup>\*</sup>Or a registered generic equivalent

#### 3 Ground, Trim-and-Edge

Use Glyphosate 4 in utility sites and substations for bare ground, trim-and-edge around objects. spot treatment of unwanted vegetation, and to eliminate unwanted weeds that are growing in established ornamental plantings or shrub beds. This product may be used before planting a utility site with ornamentals, flowers, or turfgrass (sod or seed), or prior to beginning construction

To maintain bare ground, reseat applications of this product may be used as weeds emerge.

TANK MIXTURES: Glyphosate 4 may be tank mixed with the products (or their registered generic equivalents) listed below. Refer to and observe all instructions in these products' labels for approved non-crop sites and application rates.

Arsenal	Plateau™
Banvel	Princep™DF
Barricade™ 65WG	Princep™ Liquid
Oiuron	Ronstar™ 50WP
Endurance™	Sahara™
Escort	Simazine
Garlon 3A	Surflan*

## WEEDS CONTROLLED-INDUSTRIAL, TURF, ORNAMENTAL USES

If weed growth is heavy or dense, or if weeds are growing in an undisturbed (non-cultivated) area, vays use the higher rate of this product per acre within the recommended range.

Reduced performance may result when treating weeds that are heavily covered with dust. Allow regrowth to occur prior to treatment of weeds that have been mowed, grazed or cut.

Review the following label sections for recommended rates for the control of perennial and annual weeds, woody brush and trees. For difficult to control perennial weeds, woody brush and trees, where plants are growing under stressed conditions, or where infestations are dense, obtain improved results by using Glyphosate 4 at the rate of 5 to 10 quarts per acre.

#### ANNUAL WEEDS

Use 1 quart of Glyphosate 4 per acre if weeds are less than 6 inches in height or runner length. Use 1.5 quarts to 4 quarts per acre if weeds exceed 6 inches in height or runner length, or when weeds are growing under stressed conditions.

When using spray-to-wet applications, apply a 0.5 percent solution of Glyphosata 4 to weeds less than 6 inches in height or runner length. Apply before seedhead formation in grass, or prior to bud formation in broadleaf weeds. For annual weeds that exceed 6 inches in height, or for smaller weeds growing under stressed conditions, use a 1 to 2 percent solution. The higher rate should be used 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\* Butteroup\*

Carolina foxtail\* Carolina geranium

Castor bean Cheatorass

Cheeseweed (Maiva parviflora)

Charust

Chickweed\* Cocklebur\*

Copperleaf, hophornbeam

Corn\*

Corn speedwell\* Crabgrass\*

Dwarfdandelion

Eastern mannagrass\*

Eclipta\*

Fall panicum

Falsedandelion\*

Falseflax, smallseed\* Fiddleneck

Field pennycress\*

Fleabane, annual\*

Fleabane, hairy (Conyza bonariensis)\*

Fleabane, rough

Florida pustey Foxtail\*

Goatorass idinted

Goosegrass

Grain sorghum (milo)\*

Groundsel common

Hemp sesbania

Horseweed/Marestail (Conyza canadensis)\*\*

Itchgrass\*

Johnsongrass, seedling

Junglerica Knotweed

Kochia

Lamb's cuarters!

Little barley London rocket\*

Mayweed

Medusahead Morningglory (Ipomoea spp)

Mustard, blue\*

Mustard, tansy

Mustard, tumble Mustard, wild\*

Pigweed\*

Plains/Tickseed coreopsis\* Prickly lettuce

Puncturevine

Purslane, common

Ragweed, common\* Ragweed, giant

Red rice

Russian thistle

Rye\* Ryegrass\*

Sandbur field\*

Shattercane Shepherd's purse'

Sicklepod

Signalgrass, broadleaf\*

Smartweed, ladysthumb\* Smartweed Pennsylvania\*

Sowthistle, annual

Spanishneedles

Speedwell, purslane\* Sprangletop'

Spurge, annual

Spurge, prostrate Spurge, spotted\*

Spurry, umbrella\*

Starthistie, vellow

Stinkgrass' Sunflower\*

Teaweed/ Prickly sida

Texas panicum

Velvetleaf

Virginia conperteat Virginia peoperweed\*

Wheat

Wild oats' Witchorass

Woolly cupgrass\*

\* When applying with field broadcast equipment (aerial applications or boom sprayers using flat-fan nozzles), these species will be controlled or partially controlled using 1 pint of Glyphosate 4 per acre. Applications must be made using 3 to 10 gallons of carrier volume per acre. Nozzles that ensure thorough coverage of foliage should be used, and treatment should be made when weeds are in an early growth stage

\*\* Resistance to some biotypes has been observed. If users encounter resistant biotypes, they should contact their local extension service for tank mix recommendations

Garton 3A (or the registered generic equivalent) must be thoroughly mixed with water according to label directions before adding Glyphosate 4. To avoid spray compatibility problems, have spray mixture agitating at the time this product is added

#### PERENNIAL WEEDS

For best results, apply treatment after perennial weeds reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). For use on non-flowering plants, best results are obtained when plants reach a mature stage of growth. In many situations, treatments must be made prior to these growth stages. Under these conditions, use the higher application rate within the recommended range.

When using spray-to-wet treatments by hand-held equipment, thorough coverage is essential. When using hand-held equipment for low volume directed spot treatments, apply a 5 to 10 percent solution of Glyphosate 4.

Allow a minimum of 7 days after application before tillage, unless otherwise specified.

•		-r
WEED SPECIES	APPLICATION RATE (Quarts/Acre)	HAND HELD % SOLUTION
Alfalfa*	1	2
Alligatorweed*	4	1.5
Anise (fennel)	2 - 4	1 - 2
Bahiagrass	3 – 5	2
Beachgrass, European (Ammophila Arenaria)		5
Bentgrass*	1.5	2
Bermudagrass	5	2
Bermudagrass, water (knotgrass)	1.5	2
Pindweed, field	4 – 5	2
grass, Kentucky	2	2
eweed, Texas	4 – 5	2
Brackenfern	3 – 4	1 - 1.5
Bromegrass, smooth	2	2
Bursage, wooly-leaf		2
Canarygrass, reed	2 - 3	2
Cattail	3 – 5	2
Clover; red, white	3-5	2
Cogongrass	3-5	2
Oallisgrass	3 – 5	2
Dandelion	3 - 5	2
Dock, curty	3 - 5	2
Dogbane, help	4 -	2
Fescue (except tall)	3 – 5	2
Fescue, tall	1 – 3	2
German ivy	2 – 4	1 ~ 2
Guineagrass Horsenettle	3 3 – 5	1 2
	3 – 5 4	_
Horseradish Iceptant	2	2 1.5 – 2
·	3 – 5	
Jerusalem artichoke	2 - 3	2 1
Johnsongrass	2 - 3	2
Kikuyugrass	4	2
Knapweed Lantana	<b></b>	1 - 1.25
Lespedeza	3 – 5	2
Milkweed, common	3 - 3	2
uhly, wirestem	2	2
ullein, common	3~5	2
Napiergrass	3~5	2
Nightshade, silverleaf	2	2
Nutsedge; purple, yellow	3	1 - 2
Orchardgrass	2	2
Pampasgrass	3 – 5	1.5 - 2
Paragrass	3 – 5	2
Pepperweed, perennial	4	2
Phragmites*	3 – 5	1 – 2
Poison hemlock	2 – 4	1 – 2
Quackgrass	2 - 3	2
Redvine*	2	2
Reed, grant	4 – 5	2
Ryegrass, perennial	2 – 3	1
Smartweed, swamp	3 – 5	2
Spurge, leafy*	-	2
Sweet potato, wild*		2
Thistie, artichoke	2 – 3	1 – 2
Thistle, Canada	2 – 3	2
Timothy	2 - 3	2
Torpedograss	4 - 5	2
Trumpetcreeper*	2 – 3	2
Vaseygrass	3 - 5	2
Velvelgrass	. 3 – 5	- 2
Wheatgrass, western	2 - 3	2
		-

Partial Control

### WOODY BRUSH AND TREES

Glyphosate 4 should be applied after full leaf expansion, unless otherwise directed. For larger plants and/or dense areas of growth, use the higher rate. On vines, the higher rate should be used on plants that have reached the woody stage of growth. For best results, apply in late summer or fall after fruit formation.

For best results in arid areas, apply in the spring to early summer when brush species are at high moisture content and are flowering.

When applying with hand-held equipment, ensure thorough coverage for spray-to-wet treatments. When using hand-held equipment for low volume directed-spray spot treatments, use a 5 to 10

percent solution of this product.

For fall treatments, symptoms may not appear prior to frost or senescence

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

WEED SPECIES	APPLICATION RATE (Quarts/Acre)	HAND HELD % SOLUTION
Alder	3 – 4	1 - 1.5
Ash*	2 – 5	1 - 2
Aspen, quaking	2 – 3	1 - 1.5
Bearclover (Bearmat)*	2 – 5	1 - 2
Beech'	2 – 5	1 – 2
Birch	2	1
Blackberry	3 – 4	1 – 1.5
Blackgum	2 – 5	1 - 2
Bracken	2 – 5	1 - 2
Broom; French, Scotch	2 - 5	1.5 2 1 2
Buckwheat, California* Cascara*	2 - 4 2 - 5	1 - 2
Catsclaw*	2 <b>-</b> 3	1 = 1.5
Ceanothus*	2 – 5	1 – 2
Chamise*	2 – 5	1
Cherry; bitter, black, pin	2 – 3	1 1 5
Coyote brush	3 – 4	15-2
Deerweed	2 – 5	1
Dogwood*	2 – 5	1 – 2
Elderberry	2	\1
Elm'	2 – 5	1 – 2
Eucalyptus		$\Sigma^2$
Gorse'	2 – 5	1 2
Hasardia*	2 - 4 2 - 3	1 – 2
Hawthorn	2 - 3	1 1 5 1
Hazel Hickory*	2-5	1 + 2
Honeysuckle	3-4	1 - 1.5
Hornbeam, American*	2 - 5	1 – 2
Kudzu	4	2
Locust, black*	2 - 4	1 – 2
Madrone resprouts*	<del></del>	2
Manzanita*	2 – 5	1 - 2
Maple, red	2 - 4	1 - 1.5
Maule, sugar		1 ~ 1.5
Monkey flower*	2 – 4	1 – 2
Oak; black, white*	2 - 4	1 - 2
Oak, post	3 – 4 2 – 4	1 = 1.5 1 = 1.5
Oak; norshern, pin	2 - 4	1 - 1.5
Oak, Scrub* Oak; southern red	2 - 3	1-15
Peppertree, Brazilian (Florida Holly)*	2 - 5	1 – 2
Persimmon*	2 - 5	1 - 2
Pine	2 – 5	1 - 2
Poisor: ivy	4 - 5	2
Poison oak	4 – 5	2
Poplar, yellow*	2 - 5	1 - 2
Redbud, eastern	2 - 5	1 – 2
Rose, multiflora	2	1
Russian olive*	2 - 5 2 - 4	1 – 2 1
Sage, black Sage, white*	2 - 4	1 - 2
Sage brush, California	2 - 4	1
Salmonberry	2	1
Saltcedar*	2 - 5	1 – 2
Sassafras*	2 – 5	1 – 2
Sourwood*	2 – 5	1 + 2
Sumac; laurel, poison, smooth,		
sugarbush, winged*	2 – 4	1 – 2
Sweetgum	2 – 3	1 1 5
Swordfern*	2 - 5	1 – 2
Tallowtree, Chinese	••	†
Tan oak resprouts*		2
Thimbleberry	2	1 1 – 2
Tobacco, tree*	2 – 4	2
Toyon' Trumpetcreeper	2 - 3	1 – 1.5
Vine maple*	2-5	1 - 2
Virginia creeper	2-5	1 – 2
Waxmyrtle, southern"	2 - 5	1 – 2
Willow	3	1
Yerbasenta*		2

<sup>\*</sup>Partial Control

#### FARMSTEAD WEED CONTROL

When applied as directed for NON-CROP USES under the conditions described. Glyphosate 4 controls undestrable vegetation listed on this label around farmstead building foundations, along and in fences, shelterbelts and for general nonselective farmstead weed control

## **GIYPHOSATE 4**

Review the WEEDS CONTROLLED sections of this label for instructions and specific rates of application to control various perennial and annual weeds.

#### **FARM DITCHES**

When used in accordance with instructions, Glyphosate 4 will suppress perennial grasses growing along farm ditches. A rate of 6 to 8 fluid ounces per acre should be used. For treating fine fescue, tall (coarse) fescue, orchardgrass or quackgrass covers, 8 fluid ounces per acre should be used. For best results, ammonium sulfate may be added at a rate of 1.7 pounds per 10 gallons of spray solution. Use 6 fluid ounces of Glyphosate 4 per acre without ammonium sulfate when treating Kentucky bluegrass.

Use 10 to 20 gallons of spray solution per acre for actively growing perennial grass covers. Flat fan nozzles should be used for optimum spray coverage and distribution.

Add a nonionic surfactant at a rate of 0.5 percent of the spray solution.

For control or suppression of broadleaf weeds, Glyphosate 4 should be tank mixed with a labeled broadleaf weed herbicide. When using tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

#### CONSERVATION RESERVE PROGRAM (CRP ACRES)

Use Glyphosate 4 to control undesirable vegetation when rotating out of CRP acres, or for pressing competitive growth and production of seeds of undesirable vegetation in CRP page.

Review the WEEDS CONTROLLED section of this label for application rates for various perennial and annual weeds

Use conventional spray equipment or wiper applicators for CRP uses

When using broadcast spray equipment for selective applications, use 12 to 16 ounces of Glyphosate 4 per acre in early spring before desirable CRP grasses (such as crested and tall wheatgrass) break dormancy and initiate green growth. Wait until desirable perennial grasses reach dormancy before applying in late fall.

NOTE: Some stunting of CRP perennial grasses will occur if treatments are made when plants have not reached dormancy.

#### TURFGRASSES AND GRASSES FOR SEED PRODUCTION

#### Preplant and Renovation

When applied as directed for NON-CROP USES under conditions described, Glyphosate 4 controls most existing vegetation prior to the planting or renovation of grass seed production areas.

Review the WEEDS CONTROLLED sections of this tabel for specific instructions and rates of application for the control of various trees, woody brush, and perennial and annual weeds.

For best results in controlling existing vegetation, users should delay planting to see if any yrowth occurs from escaped underground plant parts. Where additional treatments are needed, were must be sufficient regrowth prior to application. Summer or fall applications provide best control of warm-season grasses, such as bermudagrass.

DO NOT DISTURB SOIL OR UNDERGROUND PLANT PARTS BEFORE APPLYING TREATMENT. Unless otherwise specified, tillage, vertical mowing, slicing, coring, or other renovation techniques must be delayed for at least 7 days after application to facilitate proper translocation into underground plant parts.

#### Turfgrasses

Where existing vegetation is growing in a field or other unmowed area, apply Glyphosate 4 to actively growing weeds at the stages of growth that are listed in this label's WEEDS CONTROLLED sections.

Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting a minimum of one regular mowing. This will allow sufficient growth for good interception of the spray.

Desirable turfgrasses may be planted after following the procedures described above.

#### Grasses for Seed Production

Apply Glyphosate 4 to actively growing weeds at the stages of growth recommended in the WEEDS CONTROLLED section of this label before planting or renovating turf or forage grass areas that are grown for seed production.

DO NOT permit grazing or feeding of treated areas for a minimum of 8 weeks after treatment.

#### ANNUAL WEED CONTROL IN DORMANT BAHIAGRASS AND BERMUDAGRASS

When applied as directed for NON-CROP USES under the conditions described herein, Glyphosate 4 controls or suppresses many winter annual weeds and tall fescue for effective release of dormant bahiagrass and bermudagrass turf. For recommended rates and volumes on the species to be suppressed or controlled, review the rate table for Glyphosate 4 Alone under the RELEASE OF BERMUDAGRASS AND BAHIAGRASS section of this label. Apply only when turf is dormant and before spring greenup. Broadcast applications or spot treatments of this product of more than 15 fluid ounces per acre may result in delayed greenup or injury in highly maintained turfgrass areas such as lawns, golf courses, etc. OO NOT APPLY TANK MIXTURES of Glyphosate 4 plus Oust in turfgrass areas that are highly maintained.

### RELEASE OF BAHIAGRASS OR BERMUDAGRASS

NOTE: Apply only in areas where bahlagrass or bermudagrass are desirable ground covers and where temporary discoloration or injury can be tolerated. Use tank mixtures of Glyphosate 4 plus Oust (or a registered generic alternative) only on highways, railroads, utility plant sites, or other right-of-way areas.

When this product is applied as directed for NON-CROP USES under the conditions described, it provides control or suppression of tall fescue and many winter annual weeds for effective release of dormant bahlagrass or bermudagrass. Glyphoeate 4 may be tank mixed with Oust as recommended to provide residual control. Apply to dormant bahlagrass or bermudagrass. Tank mixtures of Glyphoeate 4 plus Oust could delay greenup. To minimize injury and to avoid delays in greenup, do not exceed 0 aunce of Oust per acre on bermudagrass, or do not exceed 0.5 ounce per acre on bahlagrass or apply when these grasses are in a semi-dormant condition.

To obtain best results on winter annuals, apply when plants are in an early growth stage (less than 6 inches talk) after most have germinated. To obtain best results on tall fescue, apply when fescue is either in or beyond the 4 to 6 leaf stage.

#### Weeds Controlled

Listed below are the rate recommendations for control or suppression of winter annuals and tall fescue.

Users may apply the recommended rates of Glyphosate 4 alone or as a tank mixture in 10 to 25 gallons of water, plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre.

Contact your Nations Ag II sales representative for the best recommendation regarding the mixture of weeds within your geographic area.

Weeds Controlled or Suppressed with Glyphosate 4 Alone\*

NOTE: C ≠ Control

S = Suppression

	GLYPHOSATE 4 FLUID OUNCES/ACRE					
WEED SPECIES	В	12	16	24	32	64
Barley, little (Hordeum pusilium)	S	C	C	Ċ	С	С
Bedstraw, catchweed (Gallum aparine)	s	С	C	С	С	С
Bluegrass, annual ( <i>Poa annua</i> )	S	C	C	C	С	С
Chervil (Chaerophyllum teinturieri)	s	C	С	С	С	Ċ
Chickweed, common (Stellaria media)	s	¢	С	С	C	С
Clover, crimson (Trifolium incametum)	-	S	\$	Ċ	С	С
Clover, large hop (Trifolium incarnatum)	-	S	S	С	С	С
Fescue, tall (Festuca arundinaceae)	-		-		S	S
Gerenium, Carolina (Gerenium carolinianum)	T -	-	. \$	S	С	С
Henbit (Lamium amplexicaule)	-	S	C	¢	С	С
Ryegrasa, Italian (Lolium multiflorum)	1 -	-	S	C	C	Ç
Speedwell, com (Veronica arvensis)	S	С	С	¢	C	C
Vetch, common (Vicia sativa)	T		S	С	C	С

\* These rates only apply to those sites where an established competitive turf is present.

Weeds Controlled or Suppressed with Glyphosate 4 Plus OUST\*

NOTE:

C = Control S = Suppression

	GLYP	<b>TABO</b>	E 4 PL	US OU	ST		
Glyphosate 4 Fluid Ounces per Acre	8	12	12	16	16	12	16
	+	+	+	+	+	+	+
OUST Ounces per Acre	1/4	1/4	1/2	1/4	1/2	1	1
Barley, little ( <i>Hordeum pueillum</i> )	С	C	С	С	C	С	¢
Bedstraw, catchweed (Gallum aparine)	Ċ	C	С	C	С	С	С
Bluegrass, annual ( <i>Poa annua</i> )	S	Ċ	C	Ċ	С	Ç	Ç
Chervil (Chaerophyllum tainturieri)	С	С	С	C	С	С	C
Chickweed, common (Stellaria media)	S	С	C	С	С	С	С
Clover, crimson ( <i>Trifolium Incarnatum</i> )	S	Ş	S	\$	C	С	С
Clover, large hop (Trifolium Incarnatum)			S	S	S	C	С
Fescue, tall (Festuce arundinaceae)	-		-	-		S	S
Geranium, Carolina (Geranium carolinianum)		S	S	C	С	С	C
Henbit (Lamium amplexicaule)		s	C	С	С	С	¢
Ryegrass, Italian (Lolium multiflorum)		S	S	С	С	С	¢
Speedwell, corn (Veronica arvensis)	S	С	С	Ç	C	С	С
Vetch, common (Vicia sativa)	С	С	С	С	Ċ	С	C

<sup>\*</sup> These rates (or mixtures of rates) only apply to those sites where an established competitive turf is present.

#### Release of Actively Growing Bermudagrass

When applied as directed, Glyphosate 4 will aid in the release of bermudagrass by providing control of annual species listed in this and the Oust labels' WEEDS CONTROLLED sections, and partial control or suppression of certain perennial weeds.

Use 1 to 3 pints of this product as a broadcast spray in 10 to 25 gallons of spray solution per acre for control or suppression of those annual species listed on this labet. When treating annual weeds below 6 inches in height (or length of runner in annual vines), use the lower rate. As weeds increase in size or as they approach flower or seedhead formation, use the higher rate.

For partial control of the perennial species listed below, use the higher rate of this product. For suppression of growth, use the lower rates. To obtain best results, review this label's WEEDS CONTROLLED section for proper stage of growth.

Bahiagrass

Paspalum notatum

Bluestem, silver Andropogon saccharoides

Fescue, tall Festuca arundinacea

Johnsonotass\* Sorghum halepense

numpetcreeper\*\* Campsis radicans

Vaseygrass Paspalum urviller

\* Provides control at the higher rates.
\*\* Provides suppression only at higher rates.

Glyphosate 4 may be tank-mixed with Oust. If tank mixed, do not exceed 1 to 2 pints per acre of Glyphosate 4 with 1 to 2 ounces of Oust per acre.

Apply the lower rates of both mixtures to control annual weeds less than 6 inches in height (or runner length in annual vines) that are listed in this and the Oust labels' WEEDS CONTROLLED sections. Apply the higher rates as annual weeds increase in size and as they approach the seedhead or flower stages

To provide partial control of the perennial weeds listed below, use the higher rates of Glyphosate 4. For suppression of growth, use the lower rates

#### Bahiagrass

Paspalum notatum

Bluestem, silver

Andropogon saccharoides

pomsedge

Andropogon virginicus

Dock, curly

Rumex crispus

Doglennel

Eupatorium capilliforium

Fescue, tall

Festuca arundinacea

Johnsongrass'

Sorghum halepense

Poonoe Diodia teres

Trumpetcreeper\*\* Campsis radicans

Vasevorass Paspalum urvillei

Vervain, blue Verbena hastate

Provides suppression only at higher rates

" Provides control at the higher rates.

Glyphosate 4 should be applied only on well-established bermudagrass. Injury to bermudagrass may result from treatment, but regrowth will occur under moist conditions. Severe injury may result from repeat applications in the same season and are therefore not recommended.

Review and carefully observe all cautionary statements and other information that appears on the labels of all herbicides used

### COOL SEASON TURF GROWTH REGULATION

When applied as directed herein. Glyphosate 4 suppresses growth and seedhead development of

the listed turf species in industrial sites

Glyphosate 4 may be used for management of coarse turf on roadside rights-of-way or other industrial areas. Do not apply on high-quality turf or other areas where some turf color changes are not acceptable. Slight turf discoloration may result but turf will regreen and regrow under moist conditions as the effects of Glyphosate 4 dissipate.

Mix and apply 4 to 6 fluid ounces of Glyphosate 4 per acre alone or in a recommended tank mixture. Use spray volumes of 10 to 40 gallons per acre.

When using Glyphosate 4, mix and apply 2 quarts of a nonionic surfactant per 100 gallons of spray solution

Glyphosate 4 can be used for growth and seedhead suppression as stated below

#### Tall Fescue and Smooth Brome

To obtain best results, apply Glyphosate 4 in a recommended tank mixture to actively growing turigrasses after greenup in spring. For suppression of seedheads, treatments must be applied before the boot-to-seedhead stage of development. Applications made from the time of seedhead emergence until maturity may result in turf injury or discoloration.

After mowing or the removal of seedheads, Glyphosate 4 - in a recommended tank mixture - may also be used to suppress the growth of certain turfgrasses. Turf must be permitted to recover from stress caused by drought, heat, or mowing before making applications. If applications are made to turf under stress, turf discoloration or injury may occur.

#### Annual Grasses

To suppress growth of some annual grasses such as wild barley, annual greens, and wild pats. apply 3 to 4 fluid ounces of Glyphosate 4 in 10 to 40 gallons of spray solution per acre. Apply when annual grasses are actively growing and before the seedheads are in the boot stage of development. If treatments are made after seedhead emergence, injury to the desired grasses

Tank Mixtures: For the tank mixtures mentioned below, review each product label for weeds controlled and their correct stage of application. Do not treat turf that is under stress.

Tank mixtures plus 2,4-D Amine: To obtain additional weed control benefits, up to 1 pound active ingredient per acre of 2,4-D amine may be added to the tank mixtures listed below. Consult the label for 2,4-D amine for weeds controlled.

#### Tall Fescue

Glyphosate 4 plus Telar™: For the suppression of tall fescue growth and seedheads, and to control or partially control some annual weeds, apply this tank mixture after greenup and before the boot-to-seedhead stage of development. Use no more than 0.5 ounces of Telar per acre

For turf growth suppression, this tank mixture can also be applied after mowing or removal of tall fescue seedheads. Make only one of the above-mentioned applications per growing รคลรดก

Glyphosate 4 plus Oust: For the suppression of tall fescue growth and seedheads, and to control or partially control some annual weeds, apply this tank mixture after greenup and before the boot-to-seedhead stage of development. Use no more than 0.25 ounces of Oust per acre.

Glyphosate 4 plus Escort\*\*: For turf growth suppression and control or partial control of some annual weeds, this tank mixture can be applied after mowing or after the removal of tall fescue seedheads. Use no more than 1/3 ounces of Escort per acre

NOTE: Glyphosate 4 is not registered for use with Escort in the state of California. Registered generic alternatives may be substituted for the brand name products listed herein

#### Smooth Brome

Glyphosate 4 plus Oust: For control or partial control of some annual weeds, and for suppression of smooth brome growth and seedheads, apply this tank mixture after greenup and before the boot-to-seedhead stage of development. Use no more than 0.25 ounce of Oust per acre

## BAHIAGRASS SEEDHEAD AND VEGETATIVE SUPPRESSION

When Glyphosate 4 is applied as directed in the specified noncrop areas (roadsides, airports, golf course roughs, and plant sites), it will significantly inhibit seedhead emergence and will suppress vegetative growth for a period of approximately 45 days with single applications, and for approximately 120 days with sequential applications.

Apply Glyphosate 4 from 1 to 2 weeks after full greenup of bahiagrass or after the bahiagrass has been mowed to a uniform height of approximately 3 to 4 inches. Applications must be made before seedheads emerge. Apply 6 fluid ounces of Glyphosate 4 per acre plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 25 gallons of water per acre

To extend the period of seedhead and vegetative growth suppression, sequential applications of Glyphosate 4 with 0.5 to 1 percent nonionic surfactant by total spray volume may be made at approximately 45 day intervals. For continued seedhead suppression, sequential applications must be made before seedheads emerge. Do not exceed 2 sequential applications per year. As a first sequential application, apply 4 fluid ounces of Glyphosate 4 per acre plus nonionic surfactant. Approximately 45 days after the last application, a second sequential application of 2 to 4 fluid ounces per acre plus nonionic surfactant may be made.

For seedhead inhibition and vegetative suppression, a tank mixture of this product plus Oust may be applied only on roadsides. Apply 6 fluid ounces of Glyphosate 4 per acre plus 6 25 ounces per acre of Oust, plus 0.5 to 1 percent nonionic surfactant by total spray volume 1 to 2 weeks after

an initial mowing in spring. When using Glyphosate 4 plus Oust for suppression of bahiagrass, apply only once per year.

#### **CROPPING SYSTEMS**

When used in accordance with the instructions and under the conditions described in this label's CROPPING SYSTEMS section, Glyphosate 4 controls those perennial and annual weeds listed on this label. Use prior to the emergence of direct seeded crops or prior to transplanting the crops listed on this label.

For product performance information, please review the sections of this label titled GENERAL INFORMATION and MIXING, ADDITIVES and APPLICATION INSTRUCTIONS.

EXERCISE EXTREME CAUTION TO AVOID SPRAY CONTACT WITH FOLIAGE, GREEN STEMS, CROP FRUITS OR OTHER DESIRABLE PLANTS. DESTRUCTION OR SEVERE DAMAGE MAY RESULT.

To control weeds regenerating from seed of underground parts, multiple treatments may be needed. Unless otherwise stated on this label, all treatments must be made before the crop emerges in accordance with this label's instructions.

Unless otherwise stated in a specific crop section of this label, the maximum, combined total of all treatments cannot exceed 8 quarts per acre of Glyphosate 4 per year.

"OTE: THE MAXIMUM USE RATES DESCRIBED IN THIS LABEL APPLY TO GLYPHOSATE 4 HEN COMBINED WITH ALL OTHER HERBIGIDES CONTAINING THE ACTIVE INGREDIENTS GLYPHOSATE OR SULFOSATE—WHETHER APPLIED AS A MIXTURE OR APPLIED SEPARATELY. USERS MUST CAREFULLY CALCULATE ALL APPLICATION RATES AND MAKE SURE THAT TOTAL USAGE OF GLYPHOSATE 4 AND OTHER PRODUCTS CONTAINING GLYPHOSATE OR SULFOSATE DOES NOT EXCEED THE RECOMMENDED MAXIMUM USAGE RATES.

For any crop not listed below, applications must be made at least 30 days prior to planting.

Do not harvest or feed treated vegetation for a minimum of 8 weeks after application. If applying spot treatments or using selective equipment, wait a minimum of 14 days before grazing domestic livestock or harvesting legumes or grasses.

See the following CROPPING SYSTEMS sections for specific recommended uses:

### ROW CROPS

CORN (ALL)\*
COTTON\*
PEANUTS
SORGHUM (MILO)\*
SOYBEANS\*
SUGARCANE\*

#### CEREAL GRAINS

BARLEY\*
BUCKWHEAT\*
MILLET (PEARL, PROSO)\*
OATS\*
RICE\*\*
RYE\*
TRITICALE\*
WHEAT (ALL)\*

WILD RICE

### CITRUS

CALAMONDIN
CHIRONJA
CITRON
GRAPEFRUIT
KUMQUAT
LEMON
LIME
MANDARIN ORANGE
ORANGE (ALL)
PUMMELO
TANGELO
TANGERINE
TANGORS

#### TREE NUTS

ALMOND
BEECHNUT
BRAZIL NUT
BRAZIL NUT
BRAZIL NUT
CASHEW
CHESTNUT
CHINQUAPIN
FILBERT (HAZELNUT)
HICKORY NUT
MACADAMIA
PECAN
PISTACHIO
WALNUT (BLACK, ENGLISH)

#### VINE CROPS

GRAPES KIWI FRUIT

#### **IREE FRUITS**

APPLE
APRICOTS
CHERRY (SWEET, SOUR)
LOQUAT
MAYHAW
NECTARINE
OLIVE
PEACH
PEAR
PLUM/PRUNE (ALL)
OUINCE

### **VEGETABLES**

ARTICHOKE. JERUSALEM ASPARAGUS\* BEANS (ALL) BEET GREENS BEETS (RED, SUGAR) BROCCOLI (ALL) BRUSSELS SPROUTS CABBAGE (ALL) CABBAGE, CHINESE CARROT CAULIFLOWER CASABA MELON\*\*\*
CELERIAC CELERY CHARD, SWISS CHICORY COLLARDS CRENSHAW MELON\*\*\* CUCUMBER\*\*\* EGGPLANT\*\*\* ENDIVE GARLIC" GOURDS\*\*\* GROUND CHERRY\*\*\* HONEYDEW MELON\*\*\* HONEY BALL MELON ... HORSERADISH KALE KOHLRABI LEEK LENTILS LETTUCE MANGO MELON""
MELONS (ALL)"" MUSKMELON\*\*\* MUSTARD GREENS OKRA ONION PARSLEY PARSNIPS PEAS (ALL) PEPPER (ALL)\*\*\* PERSIAN MELON\*\*\* POTATO (IRISH.SWEET) PUMPKIN' RADISH RAPE GREENS RHUBARR RUTABAGA SHALLOT SPINACH (ALL) SQUASH (SUMMER, WINTER)\*\*\* TOMATILLO\*\*\*
TOMATO\*\*\*\* TURNIP WATERCRESS\*\*\* WATERMELON\*\*\* YAMS

#### SMALL FRUITS AND BERRIES

BLACKBERRY BLUEBERRY BOYSENBERRY CRANBERRY CURRANT DEWBERRY ELDERBERRY

GOOSEBERRY HUCKLEBERRY LOGANBERRY OLALLIEBERRY RASPBERRY (BLACK, RED)

#### FORAGE CROPS AND LEGUMES

ALFALFA\*
FORAGE GRASSES\*
FORAGE LEGUMES\*

#### TROPICAL CROPS

**ACEROLA** ATEMOYA AVOCADO BANANA BREADFRUIT CANISTEL CARAMBOLA CHERIMOYA COCOA BEANS COFFEE DATES FIGS GENIP **GUAVA** JABOTICABA IACKERLIIT LONGAN LYCHEE MANGO PAPAYA PASSION FRUIT **PERSIMMONS** PLANTAINS PINEAPPLE"" **POMEGRANATE** SAPODILLA SAPOTE (BLACK, MAMEY, WHITE) SOURSOP SUGAR APPLE TAMARIND TFA

Spot treatments allowed

Do not treat rice fields or levees when the fields contain flood water.

Apply before planting only. Wait a minimum of 3 days between

application and planting.

Do not feed or graze treated pineapple forage following application.

Use on direct seeded crops only.

### .4OTE:

When applying Glyphosate 4 before transplanting crops into plastic mulch, take care to remove residues of this product—which can cause crop injury—from the plastic before transplanting. A single 1/2 inch application of water, by either natural rainfall or a sprinkler irrigation system, will remove residues. If treatments are applied at emergence, injury or death to the emerged seedlings will result.

Spot Treatment (only for those crops marked with an \*): Treatments made to growing crops must be made before the following: Heading of small grains and mile; silking of corn; initial pod set in soybeans; or boll opening on cotton.

For information regarding forage grasses and forage legumes, please review SPOT TREATMENT in the PASTURES section of CROPPING SYSTEMS of this label.

For information on dilution and application rates using boom or hand-held equipment, please review the MIXING, ADDITIVES and APPLICATION INSTRUCTIONS along with the WEEDS CONTROLLED sections of this label.

NOTE: FOR TREATING FORAGE GRASSES AND FORGE LEGUMES, DO NOT APPLY TREATMENT TO MORE THAN ONE-TENTH OF ANY ACRE AT ONE TIME. FOR ALL OTHER CROPS. NO MORE THAN 10 PERCENT OF THE TOTAL FIELD AREA TO BE HARVESTED SHOULD BE TREATED.

CROPS THAT ARE SPRAYED IN TREATED AREAS WILL BE KILLED. EXERCISE CAUTION TO AVOID DRIFT OR SPRAY OUTSIDE THE TARGET AREA—PLANT INJURY OR DESTRUCTION WILL BESLUT.

Selective Equipment: For cotion or soybeans, Glyphosate 4 may be applied through shielded applicators, wiper applicators, or recirculating sprayers. Shielded and wiper applicators may also be used in treating grapes and tree crops. Wiper applicators may be used in rutabagas, forage grasses and forage legumes, wheat, pasture sites and grain sorghum (mlio).

For specific information on proper use and calibration of equipment, please review the SELECTIVE EQUIPMENT section of the APPLICATION EQUIPMENT AND TECHNIQUES section of this label

For the following crops, allow—at a minimum—the noted time interval between application and harvest

CROPS	MINIMUM INTERVAL BETWEEN TREATMENT AND HARVEST	
Apples, Citrus, Pear	1 day	
Nut Crops	3 days	
Cotton, Soybeans	7 days	
Atemoya, Avocado, Breadfruit, Canistel,		
Carambola, Cherry, Grapes, Dates, Jaboticaba, Jackfruit, Longan, Lychee, Passion Fruit, Persimmons, Rutabagas, Sapodilla, Sapote,		
Soursop, Sugar Apple, Tamarind	14 days	
Stone Fruit	17 days	
Wheat'	35 days	
Sorghum (milo)1.2	40 days	

<sup>&</sup>lt;sup>1</sup> Do not use roller applications

#### **ASPARAGUS**

When used in asparagus in accordance with the instructions and under the conditions described under CROPPING SYSTEMS, Glyphosate 4 controls those weeds listed on this label

Review the WEEDS CONTROLLED section of this label for specific instructions and application rates for controlling various perennial and annual weeds.

Prior to Crop Emergence: For controlling emerged annual and perennial weeds mentioned on this label, apply Glyphosate 4 before crop emergence. DO NOT APPLY THIS PRODUCT WITHIN ONE WEEK BEFORE THE FIRST ASPARAGUS SPEARS EMERGE.

Spot Treatment: Glyphosate 4 should be applied immediately after cutting, but before the emergence of new asparagus spears. No more than 10 percent of the total field area to be harvested should be treated. Wait at least 5 days after treatment before harvesting.

Postharvest: Glyphosate 4 should be applied after the final harvest and all asparagus spears have been removed. If spears are permitted to regrow, wait until ferns have developed before applying Glyphosate 4. If treatments are delayed as such, they should be applied as directed sprays or as shielded sprays to avoid herbicide contact with ferns, stems, or spears. IF GLYPHOSATE 4 COMES INTO DIRECT CONTACT WITH ASPARAGUS, SERIOUS CROP INJURY OR DESTRUCTION MAY RESULT.

NOTE: Select and use recommended types of spray equipment for postemergence postharvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.

#### BERRIES AND SMALL FRUITS

For cranberries, wiper applicators may be used in accordance with the instructions in this section

For herries other than cranberries, use Glyphosate 4 as a preplant broadcast application, or as a directed appay or wiper application post-planting.

For important product performance information, please review the GENERAL INFORMATION and MIXING, ADDITIVES and APPLICATION INSTRUCTIONS sections of this label

For specific information on recommended use and calibration of equipment, please review the SELECTIVE EQUIPMENT section of the label section titled APPLICATION EQUIPMENT AND TECHNIQUES.

Do not harvest cranberries less than 30 days after the last application of Glyphosate 4. For other small fruits, allow at least 14 days after the last application of Glyphosate 4 before harvest.

For Wick or Other Wiper Applicators: Prepare a 20 percent solution by mixing 1 gallon of Glyphosate 4 in 4 gallons of water. For severe infestations, reduce ground speed of the application equipment so that adequate amounts of Glyphosate 4 are wiped on weeds. A second application going in the opposite direction may be beneficial.

DO NOT ALLOW GLYPHOSATE 4 SOLUTIONS TO COME INTO CONTACT WITH DESIRABLE VEGETATION, INCLUDING CANES, FOLIAGE, OR GREEN SHOOTS

#### CORN

Hooded Sprayers: For controlling weeds between rows of corn, Glyphosate 4 may be used through hooded sprayers—using only those hooded sprayers that completely enclose the spray nattern

A hooded sprayer is one type of shielded applicator. When a hooded sprayer is used, the crop is shielded from the spray solution because the spray pattern is completely enclosed by a hood on the top and on all 4 sides. It is extremely important that hooded sprayers are set up and operated in a way that avoids bouncing or raising the hoods off the ground in any way. If hoods are raised, spray may escape and contact the crop, causing crop damage or destruction. Spray hoods must be operated on the ground or while skimming across the ground, and users must adjust tractor speed to avoid spray hood bouncing. Do not operate hooded sprayers on rough or sloping ground where the spray hoods might be raised off the ground.

If applying Glyphosate 4 to corn that is growing on raised beds, the hood must be designed to completely enclose the spray solution. If necessary, the front and rear flaps of the hoods should be extended so that they reach the ground in deep furrows.

<sup>&</sup>lt;sup>2</sup> Do not graze or feed treated milo fodder. Do not ensile treated vegetation.

To minimize damage to desirable crops and to obtain best results, observe the following:

- 1. Spray hoods must be operated on the ground or skimming across the ground.
- 2. Apply no more than 1 quart of Glyphosate 4 per acre per application.
- 3 Corn must be a minimum of 12 inches tall (measured without extending leaves).
- 4 Leave at least an 8 inch untreated strip over the driff row. (Example: if the crop row is 38 inches wide, the maximum width of the spray hood should be 30 inches.)
- 5 Do not exceed a tractor speed of 5 mph.
- 6. Do not apply if wind speed exceeds 10 mph.
- 7. Use low drift nozzles.

Crop injury or destruction may result if the foliage of treated weeds comes into contact with the leaves of the desirable crop. Therefore, Glyphosate 4 should not be applied if the leaves of the crop are growing in direct contact with the weeds to be killed. Droplets, foam, splatter or mist from the Glyphosate 4 solution could contact the crop and cause stunting, discoloration, or crop destruction.

SEVERE DAMAGE OR DESTRUCTION MAY RESULT IF THIS PRODUCT COMES INTO CONTACT WITH ANY VEGETATION ON WHICH APPLICATION WAS NOT INTENDED. SUCH DAMAGE SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICATOR.

Please review the WEEDS CONTROLLED section of this label for specific instructions and application rates for controlling various perennial and annual weeds.

Y Glyphosate 4 treatments are applied to corn using hooded sprayers, do not graze or feed compage or fedder to livestock.

Do not apply more than 3 quarts of Glyphosate 4 per acre per year for hooded sprayer applications.

#### FALLOW AND REDUCED TILLAGE SYSTEMS

FOR AERIAL APPLICATION IN CALIFORNIA AND ARKANSAS, REFER TO THE SECTION TITLED SUPPLEMENTALLUSES AT THE END OF THIS LABEL.

For controlling annual weeds prior to emergence of labeled crops, use Glyphosate 4 in fallow and reduced tillage systems. For specific application rates and instructions, please review the WEEDS CONTROLLED sections of this label. Treatments of Glyphosate 4 may be applied using aerial or ground spray equipment. Review the APPLICATION EQUIPMENT AND TECHNIQUES section of this label for further information.

#### TANK MIXTURES

- GLYPHOSATE 4 plus BANVEL plus NONIONIC SURFACTANT
- GLYPHOSATE 4 plus 2,4-D plus NONIONIC SURFACTANT
- GLYPHOSATE 4 plus GOAL™ plus NONIONIC SURFACTANT

IN CALIFORNIA, DO NOT APPLY 2,4-D OR BANVEL TANK MIXTURES BY AIR.

For all tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Treatments of Banvel or 2,4-D must be applied a minimum of 7 days before planting com

A mixture of Banvel with Glyphosate 4 may provide short-term residual control of some weed species. However, some crop injury may result if Banvel is applied within 45 days of planting. Please review the 2,4-D and Banvel labels for use instructions and cropping restrictions.

#### Glyphosate 4 Herbicide plus Goal (or Generic Equivalent) Tank Mixtures

For controlling the weeds listed below, use Glyphosate 4 alone or in a tank mixture with Goal plus 0.5 to 1 percent nonionic surfactant by total spray volume.

Treatments should be applied when weeds are actively growing and at the height/recommended stage of growth specified below. Avoid application when weeds are under moisture stress, when dust is on foliage, or when straw canopy is covering the weeds as unsatisfactory control may result

### GLYPHOSATE 4 @ 12 FL OZ PER ACRE

Species	Maximum length / height in inches
Wheat	18
Barley	12
Bluegrass, annual	- 6
Barnyardgrass	6
Rye	6

### GLYPHOSATE 4 @ 16 FL OZ PER ACRE

<u>Species</u>	Maximum length /	
Annual Weeds Above, Plus:	height in inches	
Ryegrass, annual	6	
Chickweed	6	
Groundse	6	
Marestail*	6	
Rocket, London	6	

Shepherd's purse	6
Craboreas	12
Johnsongrass, seedling	12
Lambsquarters	12
Oats, wild	12
Pigweed, redroot	
Musterds	12

NOTE: 32 fluid ounces of Glyphosate 4 per acre should be used where heavy weed densities exist.

Resistance to some biotypes has been observed. If users encounter resistant biotypes, they
should contact their local extension service for tank mix recommendations.

# GLYPHOSATE 4 @ 12 FL OZ. / Acre plus GOAL\*\* @ 2 - 4 FL OZ. / Acre

Species	Maximum length /	
Annual Weeds Above, Plus:	height in Inches	
Cheeseweed, common		
Chickweed	3	
Groundsel	3	
Rocket, London	6	
Shepherd's purse	5	

# GLYPHOSATE 4 @ 16 FL OZ. / Acre plus GOAL\*\* @ 2 - 4 FL OZ. / Acre

Species Annual Weeds Above, Plus:	Maximum length / height in inches	\ 
Cheeseweed, common	6	
Chickweed	12	
Groundsel	6	
Rocket, London	12	
Shaphard's purse	12	

\*\* The higher rate of Goal should be used when weeds approach maximum height or stands are

### NOTE

 Mix 32 fluid ounces of Glyphosate 4 per acre with 2-4 ounces of Goal per acre on heavy weed dansities

Ground or gerial spray equipment may be used to apply recommended tank mixtures. Please review this lebel's WEEDS CONTROLLED sections for instructions and specific application rates.

### ECOFARMING SYSTEMS

The uses listed in this section are not registered for use in California.

The "Ecofarming System" consists of a rotation of winter wheat, corn/sorghum, and ecofallow

The following tank mixtures may be used for controlling emerged annual weeds prior to planting corn or sorghum in the Ecofarming System. Review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Glyphosate 4 @ 16 to 20 FL OZ per acreplus
2,4-D at 0.375 to 0.5 pound a.i. per acreplus
Atrazine at 0.75 to 1 pound a.i. per acreplus
Lasso\* herbicide at 2.5 to 3 quarts per acre

The tank mixture listed above should be applied in a liquid fertilizer carrier of 28-0-0 or 32-0-0 analysis at 20 to 30 gallons per acre. Water may be used to dilute the liquid fertilizer to attain the desired carrier volume.

WEEDS CONTROLLED: This tank mixture will control the weeds listed below up to a maximum of 4 inches in height.

Brome, downy Bromus tectorum

Cheat Bromus secalinus

Foxtail, green

Setaria viridis

Foxtail, yellow Setaria lutescens

Kochia\*

Kochia scoparia

Lettuce, prickly

Lactuca semiola

Pigweed, redroot

Amaranthus retroflexus

Thistle, Russian Salsola kali

Wheat, volunteer Triticum aestivum

\* For improved results when applying to Kochia, add Sanvel at a rate of 4 fluid ounces per acre (0.125 pound of active ingredient per acre) to the above tank mixture.

Users may reduce the risk of crop injury from 2,4-D or Banvel by applying this mixture 7 to 14 days prior to planting.

Refer to the label booklet for Lasso herbicide for pre-emergence weed control with this tank mixture.

Prior to mixing/applying this tank mix, review the specific product labels of all tank mix products for cautionary statements and crop rotation restrictions.

#### AID TO TILLAGE

hosate 4 will control downy brome, volunteer wheat, cheat, foxtail, and tansy mustard when used in conjunction with preplant filiage practices. Apply 8 fluid ounces of Glyphosate 4 plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water excr. Apply when weeds are actively growing and before they reach 6 inches in height. Treatments must be followed by conventional tillage practices within 15 days after treatment and before regrowth occurs. Allow a minimum of 1 day after treatment before tillage. Reduced effectiveness may result if tank mixtures with residual herbicides are used.

#### POSTHARVEST GRAIN SORGHUM, SORGHUM REGROWTH CONTROL

Glyphosate 4 may be applied to grain sorghum (milo) after harvest for suppression or control of regrowth. For control, apply 1 quart of Glyphosate 4 per acre. For suppression, use 1.5 pints of this product per acre. In both cases, use a 0.5 percent nonionic surfactant in 3 to 10 gallons of spray solution per acre.

#### **PASTURES**

Apply prior to planting forage grasses and legumes

Pasture or Hay Crop Renovation. Apply Glyphosate 4 as a broadcast spray prior to planting torage grasses or legumes to control the perennial and annual weeds listed in this label. Domestic investock should be removed prior to application. Wait 8 weeks after treatment before grazing or harvesting.

Spot Treatment: Glyphosate 4 can be used as a spot treatment when applied as recommended herein. Spot treatments may be applied to control perennial and annual weeds listed in this label then growing in pastures, forage grasses and forage legumes composed of bermudagrass, hiagrass, brome, bluegrass, orchardgrass, fescue, ryegrass, wheatgrass, timothy, clover, or talfa.

Wiper Application: Glyphosate 4, when applied according to instructions, controls or suppresses the weeds listed under WIPER APPLICATORS AND SPONGE BARS in the SELECTIVE EQUIPMENT section of this label.

For both spot treatment and wiper application, apply only in areas where the movement of domestic livestock can be controlled. Treat no more than one-tenth of any acre at one time. Additional treatments may be made in the same area at Intervals of 30 days. Domestic livestock should be removed prior to application. Wail 2 weeks after treatment before grazing or harvesting.

### SUGARCANE

When applied as directed for CROPPING SYSTEMS, under the conditions described, Glyphosate 4 controls those emerged annual and perennial weeds listed on this label growing in or around sugarcane or in fields prior to the emergence of plant cane. This product will also control undesirable sugarcane.

NOTE: Where multiple treatments are needed, do not apply more than 10.6 quarts of Glyphosate 4 per acre per year. Do not apply this product to plants in or around canals, ditches, or ponds containing water that will be used for irrigation.

Broadcast Treatment: Apply Glyphosate 4 to emerged weeds in 10 to 40 gallons of water per acre prior to the emergence of plant cane.

For control of various perennial and annual weeds, please see this label's WEEDS CONTROLLED sections for specific instructions and rates of application.

For removing last stubble or ration cane, apply 4 to 5 quarts of Glyphosate 4 in 10 to 40 gallons of water per acre. Apply to new growth having a minimum of 7 or more new leaves. Wait a minimum of 7 days after treatment before tillage.

Spot Treatment in or Around Sugarcane Flelds: For use with hand-held equipment, review the dilution and application rate information contained in the MIXING, ADDITIVES and APPLICATION INSTRUCTIONS and WEEDS CONTROLLED sections of this label.

To control diseased or volunteer sugarcane, apply a 1 percent solution of Glyphosate 4 in water and spray to wet foliage of plants to be controlled

NOTE: Diseased or volunteer sugarcane should have at least 7 new leaves prior to application

Avoid spray contact with healthy cane plants since severe damage or destruction may result.

Do not feed or graze treated sugarcane forage following application.

### **CONSERVATION TILLAGE, MINIMUM TILLAGE, AND NO-TILL SYSTEMS**

## CORN AND SOYBEAN

The uses listed in this section are not registered for use in California.

When applied according to the instructions and under the conditions described herein, tank mixtures listed in this section will control many emerged weeds and provide pre-emergence control of many annual weeds where soybeans or corn will be planted directly into a cover crop. established sod or in previous crop residues.

Review crop rotation and cautionary statement information listed on the fabels of all products used in these tank mixtures. Review the MIXING, ADDITIVES, and APPLICATION INSTRUCTIONS section of this label for mixing instructions.

Apply these tank mixtures in 10 to 20 gallons of water, or in 10 to 60 gallons of nitrogen solution per acre before, during, or after planting. Do not apply these mixtures after crop emergence.

When tank mixing Glyphosate 4 with residual herbicides, add an agriculturally approved nonionic surfactant at the rate of 0.5 to 1 percent by volume of spray solution. Adding 1 to 2 percent dry ammonium sulfate by weight may improve the effectiveness of this product.

NOTE: Do not exceed 4 quarts of Glyphosate 4 per acra when using these tank mixtures.

#### CORN

For residual control, this product may be tank-mixed with the following herbicides or combination of herbicides:

Atrazine	Lasso/Alachlor
Bicep Magnum™	Micro-Tech*
Bullet*	Partner*
Cyanazine	Prowl™
Duai Magnum™	Simazine
l erial*	

For all tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

To improve burndown, tank mix Glyphosate 4 with dicamba or 2.4-D. Treatments of 2.4-D or dicamba must be made a minimum of 7 days before planting corn. Please review the WEEDS CONTROLLED sections of this label for specific rate information.

#### SOYBEAN

For residual control, apply Glyphosate 4 with the following herbicides or combination of herbicides:

 Canopy™	Partner
Command™	Preview™
Dual Magnum	Prowi
Gemini ***	Pursuit™
Lasso/Alachlor	Pursuit Plus™
Lexone™	Scepter™
Linuron	Sencor™
Lorox™ Plus	Squadron™
Micro-Tech	Turbo™

For all tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

To improve burndown, tank mix Glyphosate 4 with 2,4-D or 2,4-DB. (Review the 2.4-D label for intervals between application and planting.)

### CORN AND SOYBEANS

Annual Weeds: For difficult to control weeds such as Barnyardgrass, crabgrass, fall panicum, broadleaf signalgrass and shattercane that are up to 2 inches tall, and for Pennsylvania smartweed that is up to 6 inches tall, apply Glyphosate 4 at the rate of 2 pints per acre in these tank mixtures. For other annual weeds on this label, apply 1 to 1.5 pints of Glyphosate 4 per acre when weeds are smaller than 6 inches tall, and 2 to 3 pints per acre when weeds exceed 6 inches tall. Review this label's WEEDS CONTROLLED sections for a complete list of annual weeds controlled.

Perennial Weeds: When using minimum tillage systems at normal application times, perennial weeds may not be at the proper stage of development for control. To determine the proper stage of development for perennial weeds, review the WEEDS CONTROLLED sections of this label.

Under these conditions, use 2 to 4 quarts of Glyphosate 4 per acre in the tank mixtures mentioned above to obtain top kill and reduce competition from many emerged perennial broadteal and grass weeds. See the WEEDS CONTROLLED sections of this label for information on emerged perennial weeds controlled.

To obtain the desired stage of growth, it may be necessary to apply Glyphosate 4 alone in the late summer or fall and then follow with a label-approved, seedling weed-control program at planting.

NOTE: USE OF THESE TANK MIXTURES TO CONTROL JOHSONGRASS OR BERMUDAGRASS IN MINIMUM TILLAGE SYSTEMS IS NOT RECOMMENDED. To control bermudagrass, review the CONTROL OF PERENNIAL WEEDS section of this label and follow its instructions, then use a label-approved, seedling weed-control program in a minimum tillage or conventional tillage system. To control Johnsongrass, review the CONTROL OF PERENNIAL WEEDS section and follow its instructions, then use a label-approved, seedling weed-control program with conventional tillage.

#### PREHARVEST APPLICATIONS

Glyphosate 4 will control those perennial and annual weeds tisted on this label when applied prior to the harvest of soybeans, cotton, grain sorghum (milo), and wheat. Apply as directed and under the conditions described.

Please review the WEEDS CONTROLLED sections of this label for specific rates and application instructions to control various perennial and annual weeds.

Use ground or aerial equipment to apply this product. However, DO NOT EXCEED 1 QUART OF GLYPHOSATE 4 PER ACRE WHEN APPLYING BY AIR. For specific instructions on ground and aerial applications, please review the APPLICATION EQUIPMENT AND TECHNIQUES section of this label.

NOTE: Glyphosate 4 may not be applied to crops grown for seed-a reduction of vigor or of rination may result.

Gryphosate 4 is not registered in California on preharvest grain sorghum (milo).

#### SOYBEANS

Apply Glyphosate 4 after pods have set and have lost all green color. Allow at least 7 days between the application of Glyphosate 4 and harvesting. Exercise caution to avoid excessive seed shatter loss from ground application equipment.

Do not permit livestock to graze, and do not harvest treated crop for feed, within 25 days after the last preharvest application.

FOR PREHARVEST APPLICATIONS, DO NOT APPLY MORE THAN 6 QUARTS OF GLYPHOSATE 4 PER ACRE.

#### COTTON

Apply Glyphosate 4 after sufficient bolls have developed. If applications are made prior to this time, maximum yield potential could be affected.

Broadcast Applications: Use either aerial or ground spray equipment to apply Glyphosate 4. When using broadcast equipment by ground application, apply Glyphosate 4 in 10 to 20 gallons of water per acre. When applying by air, apply treatments in 3 to 10 gallons of water per acre.

When treatments are applied prior to cotton harvest, Glyphosate 4 provides weed control and cotton regrowth inhibition. For cotton regrowth inhibition, apply 1 to 2 quarts of Glyphosate 4 in 3 to 3 gallons of water per acre. For preharvest applications, do not exceed 2 quarts of this product per 3. THE USE OF ADDITIVES FOR PREHARVEST TREATMENTS TO COTTON IS PROHIBITED.

Users may tank mix Glyphosate 4 with Folex™, DEF™ 6, or Prep™ to improve cotton leaf drop. For all tank mixes, review the tank-mix herbicides individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Allow at least 7 days between the last treatment and cotton harvest.

Do not feed treated cotton forage to livestock or permit livestock to graze treated cotton forage or hay after preharvest applications.

#### GRAIN SORGHUM (MILO)

Apply at a minimum of 7 days prior to harvest and at 30 percent or less grain moisture.

Apply up to 2 quarts of Glyphosate 4 per acre

#### WHEAT

Treatments should be applied at a minimum of 7 days prior to harvest, and after the hard-dough stage of grain (a maximum of 30 percent grain moisture).

FOR PREHARVEST APPLICATIONS TO WHEAT, DO NOT EXCEED 1 QUART GLYPHOSATE 4 PER ACRE

#### TREE AND VINE CROPS

Use Glyphosate 4 to control weeds in established vineyards, orchards, and groves, or for site preparation prior to transplanting those crops listed in this section. Unless directed otherwise in this section, treatments can be applied with Controlled Droplet Applicator (CDA), shielded sprayers, boom equipment, hand-held and high-volume wands, tances, orchard guns, or with wiper equipment. For specific information regarding the use of application equipment, please review the APPLICATION EQUIPMENT AND TECHNIQUES section of this label.

Refer to the WEEDS CONTROLLED sections of this label and to specific recommendations in this section for rates to be used.

NOTE: To control weeds originating from seeds or from underground parts of untreated weeds, inclinite treatments may be needed. Glyphosate 4 does not provide residual control of weeds, use repeated applications of Glyphosate 4 for subsequent weed control. However, do not exceed

10.6 quarts of this product per acre per year

EXERCISE EXTREME CARE TO ENSURE THAT THIS PRODUCT'S SOLUTION, SPRAY, DRIFT OR MIST DOES NOT COME INTO CONTACT WITH FOLIAGE OR GREEN BARK OF TRUNK, BRANCHES, SUCKERS, FRUIT OR OTHER PARTS OF TREES OR VINES. IF THIS PRODUCT CONTACTS OTHER THAN MATURED BROWN BARK, SERIOUS CROP DAMAGE OR DESTRUCTION MAY RESULT.

DO NOT PAINT OUT STUMPS WITH GLYPHOSATE 4 - ADJACENT TREES MAY BE INJURED FROM ROOT GRAFTING.

Reduced product effectiveness may occur if treatments are applied to perennial or annual weeds that have been grazed, mowed, or cut and have not been allowed to regrow to the recommended state for treatment.

Please review the WEEDS CONTROLLED sections of this label for instructions and application rate information, along with the specific recommendations below.

#### MIDDLES MANAGEMENT

FOR CONTROL OF ANNUAL WEEDS IN MIDDLES BETWEEN ROWS OF TREE AND VINE CROPS

When applying to citrus crops, treat uniformly between trees.

#### GLYPHOSATE 4

GLYPHOSATE 4 plus GOAL

Use Glyphosete 4 alone or in mixtures with Goal to control or suppress the annual weeds listed below. For all tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Glyphosate 4 can be applied alone or in a mixture with Goal at recommended rates, plus 0.5 to 1 percent nonionic surfactant by spray volume in 3 to 10 gallons of water per acre. Treatments should be applied when weeds are actively growing and are less than 6 inches in diameter or height. firigate prior to application if weeds are under stress caused by drought. Reduced product effectiveness may result if weeds have been mowed prior to application. Apply a maximum of 48 ounces Glyphosate 4 per acre to control weeds which have been mowed, are stressed, or are growing in dense populations

WEED SPECIES	MAXIMUM HEIGHT / DIAMETER (in inches)	RATE PER / (Fluid Oun Glyphosate 4	
Barley Hordeum vulgare Bluegrass, annual Poa annua	6	8	<b></b>
Barnyardgrass Echinochioa crus-galli Chickweed, common Steliaria media Red Makita Calandrinia ciliata	6	12	-
Crabgrass Digitaria spp. Fleabane, hairy Conyza bonariensis Groundsel, common Senecto vulgaris Junglerice Echinochioa colonum Lambsquarters, common Chenopodium album Pigweed, redroot Amaranihus retroflexus Rocket, London Sisymbrium irio Ryegrass, common Lolium multiflorum Shepherd's-purse Capseila bursa-pastoris Sowthistle, annual Sonchus oleraceus		16 OR 16 to 32 + 4	- i to 16**
Cheeseweed, common Maiva spp.	3	12 to 32 +	4 to 16
Cheeseweed, common Malve spp. Filaree* Erodium spp. Horseweed/Marestail*** Conyra canadensis Nettle, stinging Urtica dioica Purselane, common*	6	16 to 32 •	4 to 15

Purtulaca oleracea



- For suppression only
- "Mixing this product with Goal is recommended when weeds are stressed or growing in dense
- \*\* Resistance to some biotypes has been observed. If users encounter resistant biotypes, they should contact their local extension service for tank mix recommendations.

#### STRIPS

FOR PERENNIAL AND ANNUAL WEEDS IN STRIPS OF TREE AND VINE CROPS.

#### Tank Mixtures with Residual Herbicides

The following mixtures control emerged annual weeds and provide control or suppression of emerged perennial weeds listed on this label. The residual herbicides listed below will provide preemergence control of weeds listed on the individual herbicide product labels.

- GLYPHOSATE 4 Herbicide plus GOAL 2XL
- GLYPHOSATE 4 Herbicide plus KARMEX™ DE GLYPHOSATE 4 Herbicide plus KROVAR I
- GLYPHOSATE 4 Herbicide plus KROVAR II
- GLYPHOSATE 4 Herbicide plus SIMAZINE, PRINCEP CALIBER 90

- GLYPHOSATE 4 Herbicide plus SIMAZINE, PRINCEP CALIBER 9 GLYPHOSATE 4 Herbicide plus SIMAZINE 40 GLYPHOSATE 4 Herbicide plus SOLICAM™ 80DF
  LYPHOSATE 4 Herbicide plus SOLICAM™ 80DF
  LYPHOSATE 4 Herbicide plus SURFLAN AS or Oryzalin 4 A.S.
  VDINCATE 4 NASIAISE PLUSTIAN AS OR OF STATEMENT
- LYPHOSATE 4 Herbicide plus SURFLAN 75W
- GLYPHOSATE 4 Herbicide plus SIMAZINE (80W, or 4L, or
- PRINCEP CALIBER 90) plus Oryzalin 4 A.S. or SURFLAN (AS or 75W) GLYPHOSATE 4 Herbicide plus GOAL 2XL
- plus Oryzalin 4 A.S. or SURFLAN (AS or 75W)
- GLYPHOSATE 4 Herbicide plus GOAL 2XL plus SIMAZINE (80W, or 4L, or PRINCEP CALIBER 90)
- GLYPHOSATE 4 Herbiclde plus GOAL ZXL plus Oryzalin 4 A.S. or SURFLAN
   (AS or 75W) plus SIMAZINE (80W, 4L, or PRINCEP CALIBER 90)

For all tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements. Read and carefully observe the cautionary statements, claims, rates, and all other information on product labels of all herbicides used.

These tank mixtures cannot be applied in Puerto Rico

When tank-mixing with residual herbicides, add an agriculturally approved nonionic surfactant at 0.5 to 1 percent by volume of spray solution.

#### Recommended Rates

Annual Weeds: Use 1 to 5 quarts of Glyphosate 4 per acre in these tank mixtures. Rates at the high end of the recommend range should be used if weeds are stressed, are higher than 12 inches tall, or are growing in dense populations.

erennial Weeds: For control or suppression of perennial weeds, apply 1 pint to 5 quarts of lyphosate 4 per acre. Review and follow the instructions in the WEEDS CONTROLLED sections of this label for application rates and stage of growth information for specific perennial weeds.

GLYPHOSATE 4 Herbicide plus GOAL plus SIMAZINE/Oryzalin 4 A.S. (or SURFLAN)

For postemergence control of the weeds listed below, mix Glyphosate 4 with low rates of Goal in 3-way or 4-way mixtures with simazine and/or Oryzalin 4 A.S. (or Surflan). For all tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

Review the labels for simazine and Oryzalin 4 A.S. (or Surflan) for important information, including pre-emergence rates and weeds controlled

Use 3 to 40 gallons of water when applying these tank mixtures. Add a nonionic surfactant to the spray solution at the rate of 0.5 to 1 percent by total spray volume.

For controlling the following weeds, apply 1 to 5 quarts of Glyphosate 4 per acre, plus 4 to 48 fluid ounces of Goal per acre plus the applicable rates of simazine and/or Surflan (or Oryzalin 4 A.S.) listed on their respective labels. For all tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements

Barley, wild Hordeum leoorinum Bluegrass, annual Poa annua Cheeseweed, common Maiva spp. Chickweed common Stellaria media Filaree\* Erodium spp Fleabane, hairy Convza bonanensis Groundsel, common Senecio vulgaris Horseweed/Marestail\*\* Conyza canadensis

Nettle stinging Urtica dioica

Pineappleweed Matricaria matricariodes Rocket, London Sisymbrium irio Shepherd's-purse Capsella bursa-pastoris Sowthistle, annual Sonchus oleraceus

- \* Use at least 1.5 quarts of Glyphosate 4 in these mixtures.
- "Resistance to some biotypes has been observed. If users encounter resistant biotypes, they should contact their local extension service for tank mix recommendations.

NOTE: For pre-emergence weed control, these recommendations do not preclude the use of higher, labeled rates of Goal in these tank mixtures.

### PERENNIAL GRASS SUPPRESSION ORCHARD FLOORS

When applied in accordance with instructions, Glyphosate 4 will suppress vegetative growth as described below.

Glyphosate 4 will significantly inhibit seedhead emergence and will suppress vegetative growth for approximately 45 days with a single application, and with sequential applications, approximately 120 days. Apply Glyphosate 4 approximately 1-2 weeks after full green-up, or after mowing to a uniform height of 3 to 4 inches. Treatments must be made before seedhead emergence. Apply 6 fluid ounces of Glyphosate 4 with 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 25 gallons of water per acre.

To extend the period of seedhead and vegetative growth suppression, sequential applications of Glyphosate 4 plus nonionic surfactant may be made at intervals of approximately 45 days. To continue suppression of seedheads, sequential applications must be made before seedheads continue apply a maximum of 2 sequential applications annually. For the first sequential application, apply 4 fluid ounces of Glyphosate 4 with nonionic surfactant. For the second sequential application. 2 to 4 ounces may be used at approximately 45 days after the first application.

#### Bermudagress

For burndown, apply 1 to 2 quarts of Glyphosate 4 with 0.5 to 1 percent nonionic surfactant by total sprey volume in 3 to 20 gallons of water per acre. East of the Rocky Mountains: Use 1 quart of Glyphosate 4 in 3 to 20 gallons of water per acra. West of the Rocky Mountains: Use 1 to 2 quarts of Glyphosate 4 in 3 to 10 gallons of water per acra. Apply only if reduction of the bermudagrass stand can be tolerated. If burndown is necessary before harvest, allow a minimum of 21 days to ensure enough time for burndown to take place.

For suppression only (east of the Rocky Mountains): No earlier than 1 to 2 weeks after full green-up, apply 6 to 16 fluid ounces of Glyphosate 4 with 0.5 to 1 percent nonlonic surfactant by total spray volume in 3 to 20 gations of water per acre. If mowing before applying treatment, ensure a height of at least 3 inches is maintained. For shaded conditions or where a lesser degree of suppression is needed, apply at a rate of 6 to 10 ounces of this product plus nonionic surfactant. In areas where bermudagrass injury and stand reduction can be tolerated, sequential applications may be made when regrowth occurs.

For suppression only (west of the Rocky Mountains): No earlier than 1 to 2 weeks after full green-up, apply 16 fluid ounces of Glyphosate 4 with 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre to bermudagrass up to 6 inches tall. If moving before applying treatment, ensure a height of at least 3 inches is maintained. In areas where bermudagrass injury and stand reduction can be tolerated, sequential applications may be made when regrowth occurs.

#### Cool Season Grass Covers

For suppressing quackgrass, orchardgrass, fine feacue and tall fescue, apply 8 fluid ounces of Glyphosate 4 with 0.5 to 1 percent nonlonic surfactant by total spray volume in 10 to 20 gallons of water per acre. Improved results may be obtained by adding ammonium sulfate to the spray solution at the rate of 2 percent by weight or 17 pounds per 100 gallions of spray solution.

For suppressing Kentucky bluegrass covers, apply 6 fluid ounces of Glyphosate 4 with 0.5 to 1 percent nonionic surfactant. Do not add ammonium sulfate to the mix.

For optimum results, mow cool-season grass covers in spring to level their height, then apply the recommended treatment rate of Glyphosate 4 at 3 to 4 days after mowing. Treatment should be avoided for cool season grass covers under poor growing conditions, such as disease, insect damage, or drought stress (drip irrigation).

#### LOW VOLUME APPLICATION (FLORIDA AND TEXAS)

For burndown or control of listed weeds, apply the recommended rates of Glyphosate 4 with 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. In areas where weed foliage is dense, use 10 to 30 gallons of water per acre.

### Annual Weeds

Goatweed: Apply 2 to 3 quarts of Glyphosate 4 per agre with 17 pounds of ammonium sulfate per 100 gallons of water plus 0.5 to 1 percent nonlonic surfactant by total spray volume. Apply in 20 to 30 gallons of water per acre when plants are actively growing. When plants are 6 inches tall, use 2 quarts per acre. When plants are taller than 8 inches, use 3 quarts per acre. Adding Krovar II or Karmex when goatweed is taller than 8 inches may improve control. For all tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements.

#### Perennial Weeds

Apply when weeds are actively growing and are at the growth stages described in the PERENNIAL WEEDS CONTROLLED section of this label. After mowing, allow weeds to regrow to the recommended stage of development before treating.

WEED SPECIES	GLYPHOSATE 4 RATE PER ACRE				
	1 Qt.	2 Qts.	3 Qta.	5 Qts.	
Bermudagrass	В		PC	Ç	
Guineagrass: Texas and Florida Ridge	8	С	С	С	
Guineagrass: Florida Flatwoods	_	В	Ç	С	
Paragrass	В	С	C	С	
Torpedograss	S		PC	Ç	

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

#### TREE CROPS

Citrus Fruits<sup>1</sup>: Calamondin, chironja, citron, grapefruit, kumquat, lemon, lime, mandarin orange, orange, pummelo, tangelo, tangerine, tangors.

Nuts\*: Almond, beechnut, Brazil nut, butternut, cashew, chestnuts, chinquapin, filbert, hazel nut, \*ickory nut, macadamia, pecan, pistachio, walnut.

-tome Fruit\*: Apple, loguat, mayhaw, pear, guince.

Stone Fruit': Apricots, cherries, nectarines, olives, peaches, plums/prunes,

For use on chemies, any application equipment described in this section can be used in all states.

For use on citron and plives, only apply as a directed spray.

Any application equipment listed in this section may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona. California, Colorado, Idaho, Kansas, Kentudky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states specified in the following paragraph. In all other states use wiper equipment only.

For PEACHES grown in Alabama, Arkansas, Florida, Georgia, Louislana, Mississippi, North Carolina, South Carolina and Tennessee, apply only with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in sewere damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees which have been planted in the orchard for 2 or more years. EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.

Tropical Fruit: Acerola', atemoya', avocado', banana', breadfruit', canistel', carambola', cherimoya', cocoa beans', coffee', dates', figs', genip', guava', jaboticaba', jackfruit', longan', lychee', mango', mayhaw', papaya', passion fruit', persimmons', plantains', pomegranate', sapodila', sapote', soursop', sugar apple', tamarind', teal. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.

#### NOTES:

- Wait at least 14 days after last application to harvest.
- ' Wait at least 3 days after last application to harvest.
- " Wait at least 17 days after last application to harvest.
- " Wait at least 28 days after last application to harvest
- Wait at least 1 day after last application to harvest.

#### VINE CROPS

#### Klwi Fruit

Grapes: Any variety of table, wine or raisin grape may be treated with any equipment listed in this section.

Applications should not be made when green shoots, canes, or follage are in the spray zone.

Allow a minimum of 14 days between last application and harvest

in the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury

#### SUPPLEMENTAL USES

The additional label information that follows applies to the specific states, applications, uses, crops, and conditions provided in each. Information within these supplemental instructions is in addition to the instructions, uses, and precautions mentioned above. In the event of a conflict between information in the original label above and the information in the supplemental instructions below, follow the information specified in the supplemental instructions.

Supplemental uses include the following:

- 1 POSTEMERGENCE APPLICATIONS TO SOYBEANS WITH THE ROUNDUP READY\* GENE
- 2. IN-CROP APPLICATIONS TO COTTON WITH THE ROUNDUP READY\* GENE
- 3. POSTEMERGENCE APPLICATIONS TO CORN WITH THE ROUNDUP READY\* GENE
- 4 CANOLA WITH THE ROUNDUP READY® GENE
- 5. AERIAL APPLICATIONS IN FRESNO COUNTY, CALIFORNIA ONLY (From February 15 through March 31 only)
- 6 AERIAL APPLICATION IN CALIFORNIA ONLY

7. AERIAL APPLICATIONS IN ARKANSAS ONLY

#### SUPPLEMENTAL USE # 1

# POSTEMERGENCE APPLICATIONS TO SOYBEANS WITH THE ROUNDUP READY® GENE

NOTE: See GENERAL INFORMATION and MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS sections of the label booklet for essential product performance information

#### **GENERAL INFORMATION**

FOR POST-EMERGENCE APPLICATION ONLY ON SOYBEAN VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY\* GENE.

Applying this product to soybean varieties which are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants which do not contain the Roundup Ready gene, since severe injury or destruction will result.

The Roundup Ready designation indicates that the soybean contains a patented gene which provides tolerance to this herbicide. Information on Roundup Ready soybeans may be obtained from your seed supplier.

#### **Application Instructions**

This product may be applied postemergence to Roundup Ready soybeans from the cracking stage throughout flowering. Allow a minimum of 14 days between final application and harvest or feeding of soybean grain, forage or hay.

#### Maximum Allowable Yearly Rates

Cropping Season: Do not use more than 8 quarts (256 fluid ounces) Glyphosate 4 per acre.

Preplant, preemergence: Do not use more than 5 quarts (160 fluid ounces) Glyphosate 4 per agre prior to crop emergence.

In-crop: Do not use more than a total of 3 quarts (96 fluid ounces) Glyphosate 4 per acre in single or multiple in-crop applications from cracking throughout the flowering stage.

Preharvest: Do not use more than 1 quart (32 fluid ounces) Glyphosate 4 per acre applied after loss of green color in soybean pods until 14 days before harvest.

When applied as directed, Glyphosate 4 will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications.

#### Pracautions/Restrictions

The combined total application from crop emergence through harvest must not exceed 3 quarts (96 fluid cunces) per acre. Do not use more than 2 quarts (64 fluid cunces) Glyphosate 4 per acre for any single in-crop application. Do not use a combined total of more than 2 quarts (64 fluid cunces) Glyphosate 4 per acre during flowering. Allow a minimum of 14 days between final application and harvest or feeding of soybean grain, forage or hay.

There are no rotational crop restrictions following applications of this product

For ground applications: Use the recommended rates of Glyphosate 4 in 5 to 20 gallons of spray solution per acre as a broadcast spray. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use nozzles which provide a flat fan pattern. Check for even distribution of spray droplets.

For aerial applications: Use the recommended rates of Glyphosate 4 in 3 to 15 gallons of spray solution per acre. Do not exceed 1 quart per acre unless otherwise directed. DO NOT APPLY DURING LOW LEVEL INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT, DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. MAINTAIN APPROPRIATE BUFFER ZONES TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION.

### **ANNUAL WEED RATE TABLES**

The following rate recommendations will provide control of labeled grasses and broadleaf weeds in conventional and no-tiff soybean production systems. Refer to the WEEDS CONTROLLED sections of this label booklet for rate recommendations for specific annual weeds.

Nations Ag II will not warrant crop safety or weed control when Roundup Ready soybeans are treated with herbicides not specified in these supplemental instructions. Because of the potential for; 1) crop injury, 2) poor weed control from antagonism, and/or 3) rotational crop restrictions, herbicides not specified in these supplemental instructions should not be used, whether applied preemergence or applied postemergence as a tank mixture with Glyphosate 4 herbicide.

Glyphosate 4 may be used up to 64 fluid ounces per acre in any single application for control of annual weeds, where heavy weed densities exist.

NOTE: The following recommendations are based on a clean start at planting by using a burn down application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of 16 to 64 fluid ounces per acre of Glyphosate

4 can be used to control existing weeds prior to crop emergence.

#### MIDWEST / MID-ATLANTIC RECOMMENDATIONS

Narrow row or drilled soybeans: A single in-crop application of Glyphosate 4 will provide effective control of labeled weeds. For best results, an initial application of 32 fluid ounces per acre, on 4 to 8 inch weeds, is recommended. Weeds will generally be 4 to 8 inches tall 3 to 5 weeks after planting, if the initial application is delayed and weeds are 8 to 18 inches tall, use 48 fluid ounces Glyphosate 4 per acre for best results.

Under adverse growing conditions such as drought, hait, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product at 24 to 32 fluid ounces per acra may be necessary to control late flushes of weeds.

Wide row soybeans: An in-crop application of Glyphosate 4 will provide effective control of the initial stand of labeled weeds. For best results, an initial application of 32 fluid ounces per acre, on 4 to 8 inch weeds is recommended. Weeds will generally be 4 to 8 inches tall 3 to 5 weeks after planting. If new flushes of weeds occur, they can be controlled by sequential applications of this product.

#### Initial and Sequential Applications (If Needed)

Weed Height (inches)	Rate (fl oz Glyphosate 4 per acre)
1 to 3	24
4 to 8	32
8 to 18	48

Giant ragweed: Apply 32 fluid ounces Glyphosate 4 per acre when weeds are 8 to 12 inches tall to avoid the need for sequential application.

Black nightshade, Pennsylvania smartweed, velvetleaf, and waterhemp: Apply 32 fluid ounces Glyphosate 4 per acre to weeds 3 to 6 inches tall and 48 fluid ounces per acre when weeds are up to 12 inchestall. For morningglory species, apply 32 fluid ounces per acre when weeds are up to 4 inches tall, and 48 fluid ounces per acre when weeds are up to 5 inches tall.

Some weeds (such as black nightshade, woolly cupgrass, shattercane, wild proso millet, burcumber, and giant ragweed) with multiple germination times may require a sequential application of Glyphosate 4. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 24 fluid ounces of Glyphosate 4 per acre for sequential applications.

#### SOUTHEAST RECOMMENDATIONS

Narrow row, drilled, or wide-row soybeans: An in-crop application of Glyphosate 4 will provide effective control of the initial stand of labeled weeds. For best results, an initial application of 32 fluid ounces per acre, on 3 to 6 inch weeds is recommended. Weeds will generally be 3 to 6 inches tall 2 to 3 weeks after planting.

#### Initial Treatment

Weed Height (inches)	Rate (fl oz Glyphosate 4 per acre)
3 to 6	32
6 to 12	48

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of Glyphosate 4 at 16 to 32 fluid ounces per acre may be necessary to control late flushes of weeds.

### Sequential Application (If Needed)

Weed Height (inches)	Rate (fl oz Glyphosate 4 per acre)
2 to 3	16
3 to 6	24
6 to 12	32

Florida pusley, hemp sesbania and spurred anoda: Apply 32 fluid ounces per acre to weeds 2 to 4 inches for the initial application. Apply 32 fluid ounces per acre when these weeds are 3 to 6 inches tall if a sequential application is necessary.

Morninggiory, black night-shade, ground-cherry, and Pennsylvania smartweed: Apply 24 fluid ounces per acre on 1 to 3 inch weeds, 32 fluid ounces per acre on 3 to 6 inch weeds, or 48 fluid ounces per acre on 6 to 12 inch weeds for the initial application.

Some weeds (such as black nightshade, broadleaf signalgrass, Texas panicum, burcumber, and sickleped) with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 16 fluid ounces of this product per acre for sequential applications. The combined total of all in-crop postemergence treatments must not exceed 96 fluid ounces per acre.

### DELTA/MID-SOUTH RECOMMENDATIONS

Narrow row, drilled, or wide row soybeans: An in-crop application of this product will provide effective control of the initial stand of labeled weeds. A sequential application will be required to control new flushes of weeds. For best results, an initial application of 32 fluid ounces per acre, or 2 to 4 inch weeds is recommended. Weeds will generally be 2 to 4 inches tall 2 to 3 weeks after planting

#### Initial Treatment

Weed Height (Inches) Rate (f	oz Glyphosate 4 per acre)
2 to 4	32
5 to 12	48

#### Sequential Application (If Needed)

Weed Height (Inches)	Rate (fl oz Glyphosate 4 per acre	)
2 to 3	16	
3 to 6	24	
6 to 12	32	

Hamp sesbania and spurred anoda: Apply a sequential treatment of 32 fluid ounces per acre on 3 to 6 inch weeds if necessary.

Some weeds (such as black night-shade, broadleaf signalgrass, Texas panicum, burcumber, and sicklepod) with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 16 fluid ounces of this product per acre for sequential applications.

#### PERENNIAL WEEDS RATE RECOMMENDATIONS

A 32 to 64 fluid ounces per acre rate (single or multiple applications) of this product will control or suppress perannial weeds such as: bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail\* (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed, and wirestem multiple.

\* Resistance to some biotypes has been observed. If users encounter resistant biotypes, they should contact their local extension service for tank mix recommendations.

For best results, allow perennial weed species to achieve at least 6 inches of growth before spraying with Glyphosate 4 herbicide. For additional information on perennial weeds, see the WEEDS CONTROLLED sections of this label. For some perennial species, repeat application may be required to eliminate crop competition throughout the growing season.

NOTE: Non-ionic surfactants which are labeled for use with postemergence herbicides may be used. When using additional surfactant, use 0.5 percent surfactant concentration (2 quarts per 100 gallons of spray solution) for 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.

The addition of certain surfactants to this product may result in some crop response including leaf necrosis, leaf chlorosis or leaf speckling due to the surfactant added to the spray mixture. Read and carefully observe cautionary statements and other information appearing on the surfactant label.

### SUPPLEMENTAL USE # 2

## IN-CROP APPLICATIONS TO COTTON WITH THE ROUNDUP READY® GENE

NOTE: See GENERAL INFORMATION and MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS sections of the label booklet for essential product performance information. The use of additional surfactant in the spray solution may result in crop injury and reduced yield and is not recommended for over-the-top applications of this product to Roundup Ready cotton.

#### GENERAL INFORMATION

ATTENTION: FOR USE ONLY OVER-THE-TOP OF OR DIRECTED ONTO IMPROVED COTTON VARIETIES THAT ARE DESIGNATED AS COTTON WITH THE ROUNDUP READY GENE. NOTE: SEVERE INJURY OR DEATH WILL RESULT IF ANY COTTON VARIETIES NOT PROPERLY DESIGNATED AS HAVING THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT. INSTRUCTIONS FOR USE ON ROUNDUP READY COTTON (CONL.)

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS AND TREES, OTHER THAN CROPS WITH THE ROUNDUP READY GENE, SINCE SEVERE INJURY OR DESTRUCTION WILL RESULT.

ROUNDUP READY COTTON VARIETIES MUST BE PURCHASED FROM AN AUTHORIZED LICENSED SEED SUPPLIER. THE DESIGNATION, "ROUNDUP READY", INDICATES THE COTTON VARIETY CONTAINS A PATENTED PROPRIÉTARY TRAIT.

#### **APPLICATION INSTRUCTIONS**

This product will control many troublesome weeds with over-the-top, post-directed, hooded sprayer, or preharvest applications in Roundup Ready cotton.

#### Maximum Allowable Yearly Rates

Combined total per year for all applications	. 8 quartsracre
Preplant, Preemergence applications	5 quarts/acre
3. Total in-crop applications from cracking to layby	4 quarts/acre
Maximum preharvest application rate	2 quarts/acre

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

For aerial applications, apply this product in 3 to 15 gallons of water per acre.

DO NOT EXCEED A MAXIMUM RATE OF 1 QUART PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR, UNLESS OTHERWISE DIRECTED.

FOR AERIAL APPLICATION IN CALIFORNIA OR ARKANSAS, REFER TO THE SUPPLEMENTAL USE INSTRUCTIONS AT THE END OF THIS LABEL FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS, AVOID DRIFT, EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE. Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions which favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

There are no rotational crop restrictions following applications of this product

Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready cotton. Follow the cleaning procedures specified on the label of the product(s) previously used. Cotton is very ensitive to many herbicides at extremely low concentrations and care should be taken to roughly clean all equipment prior to use.

In addition to uses listed for cotton in the CROPPING SYSTEMS section of this label, the following applications can be made:

Over-the-top applications: This product may be applied by serial or ground application equipment postemergence to Roundup Ready cotton from the ground cracking stage until the four leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the four leaf (node) stage of development may result in boil loss, delayed maturity and/or yield loss. Any single over-the-top broadcast applications should not exceed 1 quart per acre. No more than two over-the-top broadcast applications may be made from crop emergence through the four leaf (node) stage of development. Sequential over-the-top applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications. The use of additional surfactant in the spray solution may result in crop injury and reduced yield and is not recommended for over-the-top applications of this product to Roundup Ready cotton.

NOTE: Always plant into a weed free seedbed. In no-till and stale seedbed systems, always burn down existing weeds before cotton emerges. Apply a preplant burndown treatment of 16 to 48 fluid ounces per acre of this product.

Post-directed or hooded applications: This product may be applied using precision post-directed or hooded sprayers to Roundup Ready cotton through layby. At this stage, post-directed equipment should be used which directs the spray to the base of the cotton plants. Contact of the spray with cotton leaves should be avoided to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 PSI). For best results, make applications while weeds are small (less than 3 inches). Any single post-directed application should not exceed 1 quart Glyphosate 4 per acre. No more than two applications should be made from the fifth leaf through layby. Sequential in-crop applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications.

ATTENTION: USE OF GLYPHOSATE 4 IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS; AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

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

Weeds controlled: For specific rates of application and instructions for control of various annual and perennial weeds, refer to WEEDS CONTROLLED sections of this label. Glyphosate 4 applied at 1 quart per acre will burndown or suppress the growth of the following perennial weeds and reduce crop competition: yellow and purple nutsedge, rhizome johnsongrass, common bermudagrass, silverleaf nightshade, frumpet creeper, and redvine. Fall preharvest applications may be required for control of these perennial weeds.

Tank mixtures with other herbicides may result in reduced weed control or crop injury and are not recommended for over-the-top applications of this product.

Some weeds with multiple germination times or suppressed (stunted) weeds may require sequential applications of this product for control.

Preharvest applications: This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boll crack. For application rates please see the WEEDS CONTROLLED sections of this label booklet. This product may be applied using either aerial or ground spray equipment. Aerial and ground applications may be made up to a maximum of 2 quarts per acre. Allow a minimum of 7 days between final application and harvest of cotton or feeding of cotton forage or hay. THE USE OF ADDITIVES FOR PREHARVEST APPLICATION OF GLYPHOSATE 4 TO ROUNDUP READY

COTTON IS PROHIBITED. NOTE: Glyphosate 4 will not enhance the performance of harvest aids when applied to Roundup Ready cotton. DO NOT APPLY GLYPHOSATE 4 PREHARVEST TO CROPS GROWN FOR SEED.

#### **SUPPLEMENTAL USE #3**

## FOR POSTEMERGENCE APPLICATIONS TO CORN WITH THE ROUNDUP READY® GENE

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

See GENERAL INFORMATION and MIXING sections of this label booklet for essential product performance information.

#### **GENERAL INFORMATION**

USE THIS PRODUCT ONLY ON CORN HYBRIDS DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

Applying this product to corn hybrids which are not designated as Roundup Ready will result in severe crop injury and yield loss.

The Roundup Ready designation indicates that the corn contains a patented gene which provides tolerance to this herbicide. Information on Roundup Ready corn may be obtained from your seed supplier.

#### **APPLICATION INSTRUCTIONS**

This product may be applied postemergence to Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first. Single in-crop applications of this product must not exceed 1 quart per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 2 quarts per acre per growing season.

#### Maximum Yearly Rates Allowed

Preplant: Do not apply more than 5 quarts per acre prior to crop emergence.

In-crop: Do not use more than a combined total of 2 quarts Glyphosate 4 per acre in multiple incrop applications from emergence through the V8 stage or 30 inches.

Preharvest: Do not apply more than 1 quart Glyphosate 4 per acre after maximum kernal fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest.

Cropping Season: Do not exceed 8 quarts Glyphosate 4 per acre as a combined total per year for all applications.

When applied as directed, this product controls tabeled annual grass and broadleaf weeds in Roundup Ready corn, Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product. Applications should be made to actively growing weeds before they reach the maximum size listed in the WEEDS CONTROLLED sections of this label booklet. Refer to the MIXING section of the label booklet for proper use instructions.

The addition of 1 to 2 percent dry ammonium suitate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product under hard water conditions, drought conditions or when tank mixed with Bullet, Micro-Tech, or Partner, herbicase. For all tank mixes, review the tank-mix herbicides' individual product labels for specific crops, application rates, geographical restrictions, and precautionary statements. Ensure that ammonium suitate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion. The addition of other additives, including fertilizers and micro-nutrients are not recommended with this product since this may result in increased potential for crop injury.

Allow a minimum of 50 days between application of this product and harvest of corn forage and 7 days between application and harvest of corn grain. Allow a minimum of 10 days between in-crop applications of this product. There are no rotational crop restrictions following applications of this product.

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE.

THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.

For ground applications: Use the recommended rates of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. Carefully select correct nozzles and spray pressure to avoid spraying a fine mist. Check for even distribution of spray droplets.

For aerial applications: Use the recommended rates of this product in 3 to 15 gallons of spray solution per acre. Do not exceed 1 quart per acre. See WEEDS CONTROLLED sections on this label. AVOID DRIFT—DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO

PREVENT INJURY TO ADJACENT VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

#### WEED CONTROL RECOMMENDATIONS

Apply 24 to 32 fluid ounces of Glyphosate 4 per acre for control of labeled grasses and broadleaf weeds in conventional and no-tilt corn production systems. Refer to the WEEDS CONTROLLED sections of this label booklet for rate recommendations for specific annual weeds. Glyphosate 4 applied at up to 1 quart per acre will control or suppress the growth of perennial weeds such as: bermudagrass. Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed, and wirestern muhly. For additional information on perennial weeds, see the PERENNIAL WEED sections of the WEEDS CONTROLLED sections of this label booklet.

#### Preemergence Followed by Postemergence Weed Control Program

This product may be applied posternergence in-crop following any labeled preemergence herbicide application. The post application of this product should be made before the weeds reach a height and/or density that the weeds become competitive with the crop. A single in-crop application of this product at the recommended rate will provide control of emerged weeds listed on the label. This product may be applied postemergence to Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches (free standing), whichever comes first.

#### Insternergence Only Weed Control Program

. nis product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on the label. The postemergence application of this product should be made before the weeds neach a height and/or density that the weeds become competitive with the crop. If new flushes of weeds occur, a sequential application of this product at 24 to 32 fluid ounces per acre will control the labeled grasses and broadleaf weeds. This product may be applied postemergence to Roundup Ready corn from emergence through the V8 stage or until corn height reaches 30 inches (free standing), whichever comes first.

This product may be applied in tank mixture with a labeled rate of Harness™, Harness Xtra, Harness Xtra 5.6L. Micro-Tech, Bullet, Partner, Permit™ or atrazine herbicides, Refer to the specific product label and observe all precautionary statements and limitations on the label for all products used in tank mixtures, including specific crops, application timing restrictions, application rate, geographical restrictions, soil restrictions, minimum re-cropping interval and rotational guidelines—the more restrictive requirements apply. Tank mixtures with other products may result in increased potential for crop injury and/or weed antagonism. Refer to the table below for height limitation for tank mix partner.

Tank Mix Partner	Maximum Height Of Corn For Application	
Harness	11 inches	
Harness Xtra		
Harness Xtra 5.6L		
Bullet*	5 inches	
Micro-Tech*		
Partner*		
Permit	24 inches	
Atrazine	12 inches	

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

Bullet, Harness, Micro-Tech and Partner are registered trademarks of Monsanto Company, Permit is a trademark of, and used under license from, Nissan Chemical Industries, Ltd.

#### SUPPLEMENTAL USE # 4

## CANOLA WITH THE ROUNDUP READY® GENE

See GENERAL INFORMATION and MIXING sections of this label booklet for essential product performance information.

#### GENERAL INFORMATION

USE ONLY ON CANOLA WHICH CONTAINS THE ROUNDUP READY, GENE. DO NOT USE THIS PRODUCT ON CANOLA WITH THE ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MAYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA.

Applying this product to canola which is not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants which do not contain the Roundup Ready gene since severe injury or destruction will result.

The Roundup Relady designation indicates the canola contains a patented gene which provides tolerance to this herbicide. Information on Roundup Ready canola may be obtained from your seed supplier

#### **USE RECOMMENDATIONS**

This product will control many troublesome emerged weeds when applied preplant, preemergent

and/or with over-the-top applications in Roundup Ready canola. Allow a minimum of 60 days between last application and canola harvest.

#### Maximum Allowable Combined Yearly Rates

Preplant and preemergence applications	 	2 quarts/acre
Total in-crop application from emergence to 6 leaf		1 quart/acre

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

For serial applications apply this product in 3 to 15 gallons of water per acre.

AVOID DRIFT, EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE. DO NOT APPLY DURING LOW-LEVEL INVERSION CONDITIONS. WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

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

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

There are no rotational crop restrictions following applications of this product.

#### Sprayer Preparation

It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready canola. Follow the cleaning procedures specified on the label of the product(s) previously used. Canola can be very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

### Preplant or Preemergent Applications

This product may be applied by aerial or ground application equipment prior to planting or emergence of canota. The maximum combined application rate from all preplant and pre-emergent applications should not exceed 2 quarts per acre per season.

NOTE: In no-III and stale seedbed systems, atways use a burndown treatment to control existing weeds before canola emerges. Apply a preplant burndown treatment of 16 to 32 fluid ounces per acre of this product.

#### Over-the-top Applications

This product may be applied by aerial or ground application equipment postemergence to Roundup Ready canola from emergence through the six leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.

Single Application: Apply 16 to 24 ounces per sore no tater than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications which may result in temporary yellowing, delayed flowering, and or growth reduction. Similar injury may result when applications of more than 16 ounces per acre are applied after the 4-leaf stage.

Sequential Applications: Apply 16 ounces per acre to 1 to 3 leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential applications are recommended for early emerging annual weeds and perennial weeds such as Canada thistle and quackgrass.

This product will control or suppress, most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

No more than two over-the-top broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application should not exceed 32 ounces per acre.

#### WEED CONTROL RECOMMENDATIONS

For specific rates of application and instructions for control of various annual and perennial weeds, refer to the WEEDS CONTROLLED sections of this label booklet.

Tank mixtures with other herbicides, insecticides, or fungicides may result in reduced weed control or crop injury and are not recommended for over-the-top applications of this product.

Some weeds with multiple germination times or suppressed (stunted) weeds may require sequential applications of this product for control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

#### **SUPPLEMENTAL USE #5**

#### AERIAL APPLICATIONS IN FRESNO COUNTY. CALIFORNIA ONLY (From February 15 through March 31 only)

NOTE: For aerial application outside these dates, refer to the AERIAL APPLICATION IN CALIFORNIA ONLY statewide supplemental label below.

See the GENERAL INFORMATION and MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS sections of this label booklet for essential product information

See the CROPPING SYSTEMS section of this label booklet for specific recommendations on the use of this product.

#### APPLICABLE AREA

This supplement applies only to the area contained inside the following boundaries within Fresno County, California.

North:

Fresno County line

South East:

Fresno County line

West

State Highway 99

Fresno County line

#### **GENERAL INFORMATION**

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

Observe the following directions to minimize off-site movement during aerial application of Glyphosate 4. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor, and serial applicator.

#### Written Recommendations

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

#### Aerial Applicator Training and Equipment

Aerial application of Glyphosate 4 is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight, and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and catibrate spray equipment at intervals sufficient to insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved "fly-ins" constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Freeno County Agricultural Commissioner

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

### SUPPLEMENTAL USE # 6

## **AERIAL APPLICATION IN CALIFORNIA ONLY**

See GENERAL INFORMATION and MIXING sections of this label booklet for essential product

See the CROPS section of this label booklet for specific recommendations on the use of this produci

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF THE SPRAY WITH FOLIAGE, GREEN STEMS, OR FRUIT OF DESIRABLE CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL "ROUNDUP READY" CROPS), PLANTS, TREES OR OTHER DESIRABLE VEGETATION, SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

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

- 1 In fallow and reduced tillage systems prior to the emergence or transplanting of labeled crops.
- 2. In alfalfa and pasture renovation applications.
- Application to brush and chaparral. Refer to the current supplemental label for directions for this use
- 4 Preharvest in alfalfa, corn, cotton, wheat and Roundup Ready corn, Observe this label's specific preharvest application instructions for each individual crop.

Do not plant subsequent crops other than those listed in this label booklet for 30 days following

#### application

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

DO NOT EXCEED A MAXIMUM RATE OF 2 QUARTS PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR IN FALLOW AND REDUCED TILLAGE SYSTEMS, ALFALFA AND PASTURE RENOVATION AND BRUSH AND CHAPARRAL APPLICATIONS.

DO NOT EXCEED A MAXIMUM RATE OF 1 QUART PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR IN ALFALFA, CORN, COTTON, WHEAT AND ROUNDUP READY CORN PRIOR TO HARVEST.

#### **AERIAL EQUIPMENT**

Use the recommended rates of this product in 3 to 15 gallons of water per acre. 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 disposing of equipment wash waters

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

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops.

- 1. Do not apply within 100 feet of all desirable vegetation or crop(s).
- 2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
- 3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.
- 4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

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 air-stream 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 over-tapped application, use appropriate marking devices. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills.

PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART, LANDING GEAR IS MOST SUSCEPTIBLE. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

### SUPPLEMENTAL USE # 7

## **AERIAL APPLICATIONS IN ARKANSAS ONLY**

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 the GENERAL INFORMATION and MIXING sections of this label booklet for essential product performance information.

#### USE DIRECTIONS

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

Use the recommended rate of this product in 3 to 15 gallons of water per acre.

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

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

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

Nozzles must always discharge backward parallel with the air stream and never discharge



downwards more than 45 degrees on fixed wing aircraft or forward of the prevailing air flow on rotary winged aircraft. Avoid the use of nozzles with wide angle discharge.

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

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

Use the following guidelines when applications are made near crops or other desirable vegetation:

- 1 Do not apply within 100 feet of any desirable vegetation or crops
- If wind up to 5 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the de-sirable vegetation or crops.
- Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

#### LIMITED WARRANTY, TERMS OF SALE, AND LIMITATION OF LIABILITY

PORTANT INFORMATION, READ BEFORE USING PRODUCT

IMPORTANT: Read the information below before using this product. If the terms are not acceptable, you should return the unopened product container immediately for a complete refund.

Upon purchase or use of this product, purchaser and user agree to the following terms:

<u>Warranty</u>: Nations Ag II, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions-noted below, which are beyond the Company's control. The Company makes no other representation or warranty, express or implied, concerning the product, including no implied warranty of merchantability or fitness for a particular purpose; no such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

Term of Sale: The Company's directions for use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials and the manner of use or application (including failure to adhere to label directions), all of which are beyond the Company's control. All such risks are assumed by the user.

Limitation of Liability: The exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. Under no circumstances shall the Company be liable for any special, indirect incidental or consequential damages of any kind, including loss of profits or income, and any such claims are hereby waived. Some states do not allow the exclusion or mitation of incidental or consequential damages.

The Company and seller offer this product, and the purchaser and user accept this product subject to the foregoing warranty, terms of sale and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.

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DEF is a trademark of Mobay Chemical Company.

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Thru-Valve is a trademark of Waldrum Specialties, Inc.

Nations Ag II, LLC 2901-12 Rivendell Knoxville, TN 37922

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For questions regarding this product call 800-979-8994.