**(O CHEMINOVA** 

Complete Directions for Use

EPA Reg. No. 4787-23

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

Glylos is a registered trademark of CHEMINOVA AGRO A/S.

9/122/9

Carefully follow detailed instructions in label booklet.

GENERAL INFORMATION

MIXING DIRECTIONS

APPLICATION EQUIPMENT AND TECHNIQUES

CROPS / USES

MARKERS

**ANNUAL WEED CONTROL** 

PERENNIAL WEED CONTROL

WOODY BRUSH & TREES

9/122/9/PO499 EPA Reg. No.4787-23

Authorized Representative: Cheminova, Inc. Oak Hill Park 1700 Route 23 Wayne, NJ 07470 (800) 548-6113

Manufactured for CHEMINOVA AGRO A/S • Lemvig •

# Glyfos X-TRA

**()** CHEMINOVA

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#### DISCLAIMER

The label instructions for the use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, 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, or the manner of use or application all of which are beyond the control of Cheminova. All such risks shall be assumed by the user.

Cheminova warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the Directions for Use set forth in the Complete Directions for Use label booklet ("Directions"), subject to the risks referred to above.

Any damage arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or values or any other special or indirect damages.

Cheminova makes no other express or implied warranty including any other express or implied warranty of FITNESS or MERCHANTABILITY.

The sale of this product does not include a license under any patent owned by Cheminova.

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Read the entire label before using this product.

Use only according to label instructions.

Read "DISCLAIMER" before buying or using.

If terms are not acceptable, return product unopened.

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#### 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. (It you do not understand the label, find someone to explain it to you in detail.)

#### **ACTIVE INGREDIENT:**

*Glyphosate, N-(phosphonomethyl)glycine, in the	
form of its isopropylamine salt	41.0%
INERT INGREDIENTS:	59.0%
TOTAL:	00.0%

\* Contains 480 grams per liter or 4 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 365 grams per liter or 3 pounds per U.S. gallon of the acid, glyphosate.

Manufactured for CHEMINOVA AGRO A/S P.O. Box 9, Lemvig Denmark Authorized Representative: Cheminova, Inc.

1700 Route 23 Wayne, NJ 07470

EPA Reg. No. EPA Est. No. 4/87-23 39578-TX-1

Net Contents: 1,2,5,or 30 Gallons and Bulk

® Glylos is a registered trademark of Cheminova Agro A/S

IN CASE OF A MEDICAL EMERGENCY, CALL TOLL FREE, DAY OR NIGHT 1-800-228 5635, Ext. 153

### ACCEPTED

JUL 2 8 2000

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under WPA Reg. No 4787-23

#### **PRECAUTIONARY STATEMENTS**

# Hazards to Humans and Domestic Animals Keep Out Of Reach Of Children

#### WARNING! AVISO!

#### WARNING!

Causes substantial but temporary eye injury. Harmful if inhaled or absorbed through skin. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before re-use.

#### FIRST AID

IF IN EYES; Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a Poison Control Center or doctor for treatment advice.

IF ON SKIN: Take off contaminated clothing. Ranse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give a utical respiration, preferably mouth-to-mouth, if possible. Call a Poison Control Center or doctor for treatment advice.

IF SWALLOWED: Call a Poison Control Center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a Poison Control Center or doctor.

Have the product container or label with you when calling a Poison Control Center or doctor, or when going for treatment.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear long sleeved shirt and long pants, shoes plus socks, and protective eyewear. Follow manufacturers instructions for cleaning / maintaining PPE. If no such instructions for wash-

ables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

#### User Safety Recommendations:

- Wash hands before eating, drinking, thewing gum, using tobacco, or using the tollet.
- Remove clothing immediately if contaminated. Wash thoroughly and put on clean clothing.

Domestic Animals: This product is considered to be relatively non-toxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

#### **ENVIRONMENTAL HAZARDS**

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

### PHYSICAL OR CHEMICAL HAZARDS

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

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLU-

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TIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

#### **DIRECTIONS FOR USE**

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

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

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

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# 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.

# FOR MORE INFORMATION, CALL TOLL-FREE 1-800-548-6113

# STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal. DISPOSAL: Wasters resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landful approved for pesticide disposal or in accordance with applicable federal, State or local

Emploed container retains vapor and product residue. Observe all labeled safeguards until container is destroyed.

FOR BULK CONTAINERS: Triple ruise emptied bulk container. Then offer for recycling or reconditioning, or dispose of in a manner approved by state and local authorities.

FOR MINIBULK REFILLABLE CONTAINERS: Do not reuxe container, except for refull in accordance with a valid Cherminova Repackaging or Toll Repackaging Agreement. If not refulled or returned to an authorized repackaging lacidity, temper inside container, then puncture and dispose of in a repackaging lacidity, or by incineration, or if allowed by state and local authorites, by burning. Il burned, stay out of snoke.

FOR ALL OTHER NON-RETURNABLE / REFILLABLE CONTAINERS:

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.

#### **GENERAL INFORMATION**

#### **Product Description:**

This product is a post-emergent, systemic herbicide with no soil residue activity. It is generally non-selective and gives broad spectrum control of many annual weeds, perennal weeds, woody brush and trees. It is formulated as a water-soluble liquid. No additional surfactant, additives containing surfactant, buffering agents or pH adjusting agents are needed or recommended. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions. Do not add surfactants, additives containing surfactants, buffering agents or pH adjusting agents to the spray solution when Glyfos X-TRA is the only pesticide used. Ammonium Sulfate may be used. See the "MIXING" section of this label for instructions.

#### Time to Symptoms:

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

#### Stage of Weeds:

Annual weeds are easiest to control when they are small, Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the annual, perennial, woody brush and trees rate tables for recommendations for specific weeds.

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

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

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#### Cultural Considerations:

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

#### Rainfastness:

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

#### Spray Coverage:

For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runolf.

#### Mode of Action:

The active ingredient in this product inhibits an enzyme found only in plants that is essential to formation of specific amino acids.

#### No Soil Activity:

Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

When this product comes in contact with soil, it is bound to soil particles. Under recommended use situations, once this product is bound to soil particles, it is not available for plant uptake and will not harm off-site vegetation where roots grow into the treated area or if soil is transported off-site. The strong affinity of this product to soil particles prevents this product from leaching out of the soil profile and entening ground water.

#### Biological Degradation:

Degradation of this product is primarily a biological process carried out by soil microbes.

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#### Volatility:

Glyfos X-tra is non-volatile. Therefore, it cannot move as a vapor after application to affect nearby vegetation.

#### **Toxicology Testing:**

Exposure to workers and other applicators generally is expected to pose minimal risks based on results of short-term toxicity studies. Glyphosate has been thoroughly tested and determined not to cause cancer or other adverse long-term health effects.

#### Tank Mixing:

This product does not provide residual weed control. For subsequent residual weed control, follow a label approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this labeling. Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance.

#### Annual Maximum Use Rate:

Except as otherwise specified in the crop section of this label, the combined total of all treatments must not exceed θ quarts of this product per acre per year.\*

For non-crop uses, the combined total of all treatments must not exceed 10.6 quarts of this product per acre per year.\*

\* The annual maximum use rate includes other glyphosate containing products,

#### **ATTENTION**

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

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

Do not allow the herbicide solution to mist, drip, drift or splash onto destrable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser wind velocities, will allow spray drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

#### **MIXING DIRECTIONS**

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

NOTE: Reduced results may occur if water containing soil is used, such as visibly middly water or water from ponds and ditches that is not clear,

#### Mixing with Water:

This product mixes readily with water. Mix spray solutions of this product as follows:

- 1. Fill the mixing or spray tank with the required amount of water.
- 2. Add the recommended amount of this product near the end of the filling process and mix well.
- 3. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices required by state or local regulations.
- 4. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

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#### Tank Mixing Procedure:

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Mix labeled tank mixtures of this product as follows:

- 1. Place a 20 to 35 mesh screen or wetting basket over filling port.
- Through the screen, fill the spray tank one-half full with water and start agitation.
- If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
- If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
- If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
- Continue filling the sprayer tank with water and add the required amount of this product near the end of the filling process.
- Add individual formulations to the spray tank as follows: wet table powder, flowable, emulsifiable concentrate, drift control additive, water soluble liquid.

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

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

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

#### Mixing for Hand-held Sprayers:

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

Spray Solution						
Desired Amount of G						
Volume	ж%	1%	1%%	1%	5%	10%
1 Gat	'n oz	1% oz	2 oz	2% oz	6% oz	13 oz
25 Gal	1 pt	1 qt	13 qt	2 qt	5 qt	10 qt
100 Gal	2 qt	1 gal	1¼ gal	2 gal	5 gal	10 gal

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the recommended amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

#### Ammonium Sulfate:

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product, particularly when tank mixed with certain residual herbicides on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides.

Thoroughly rinse the spray system with clean water after use to reduce corrosion.

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

#### Colorants and Dyes:

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

#### **Drift Control Additives:**

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and CDA equipment. When a drift control additive is used, read and carefully observe cautionary statements and all other information appearing on the additive label.

# APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system. This product may be applied with the following application equipment:

Aerial - fixed Wing and Helicopter

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

Hand-Held and High-Volume Spray Equipment: Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other hand-held and motorized spray equipment used to direct spray onto weed foliage.

 This product is not registered in California or Arizona for use in mist blowers.

Selective Equipment - Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Injection Systems - Aerial or ground injection sprayers.

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

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

#### Aerial Equipment

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

Use the recommended rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not excred 1 quart per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems and fallow and reduced tillage systems and preharvest applications. Refer to the individual use area sections of this label for recommended volumes and application rates.

FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS. This product plus Banvel<sup>14</sup> or 2,4-D tank mixtures may not be applied by air in California.

Avoid direct application to any body of water.

Ensure uniform application - To avoid streaked, uneven or overlapped 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 and from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART.

LANDING GEAR ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

#### Aerial Spray Drift Management

DRIFT MAY CAUSE DAMAGE TO ANY OTHER VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

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The applicator should be familiar with and take into account the information covered in the <u>Aerial Orift Reduction Advisory Information</u>.

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 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 higher rated flows produce larger droplets. Pressure: Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy protection.

When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure. Nozzle Orientation: Orienting nozzles so that the spray is released backwards, parallel to the aristream, 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: 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 exposure of droplets to evaporation and wind.

Swath Adjustment - When applications are made with a cross-wind, the swath will be displaced downwind.

Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind - Drift potential is lowest between wind speeds of 2-10 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: tocal 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 Inversion - 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 temperature 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 log 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 connected cloud (under low wind conditions) indicates an inversion, while smoke that move upwards 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).

#### **Ground Broadcast Equipment**

Use the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzles to avoid spray-

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ing a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

#### Hand-Held and High Volume Equipment

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

For control of weeds listed in the annual weeds rate tables, apply a 0.5% solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 1% solution.

For best results, use a 2% solution on harder-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods which result in less than complete coverage, use a 5% solution for annual and perennial weeds and a 5 to 10% solution for woody brush and trees.

#### **Selective Equipment**

This product may be applied through reorculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars after dilution and thorough mixing with water to listed weeds growing in any noncrop site specified on this label and only when specifically recommended in cropping systems.

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

A shielded or hooded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide.

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



## AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

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

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is expused to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when height of the weed varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary.

#### Shielded and Hooded Applicators:

Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBI-CIDE WITH DESIRABLE VEGETATION.

Wiper Applicators and Sponge Bars:

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed.

Equipment must be designated, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact of weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

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

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% solution. Apply this solution to weeds listed in this section.

#### For Porous-Plastic Applicators:

Solutions ranging from 33 to 100% of this product in water may be used in porous-plastic wiper applicators.

When applied as recommended, this product CONTROLS the following

Corn, volunteer\* Sicklepod Panicum, Texas Spanishneedles Rye, common Starbur, bristly

Shattercane

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

> Beggarweed, Florida Ragweed, common Bermudagrass Ragweed, grant Dogbane, hemp Smutgrass Dogfennel Sunflower Gumeagrass Thistie, Canada Thistle, musk Johnsongrass Milkweed Vaseygrass Velvetleaf

Nightshade, silverleaf Pigweed, redroot

#### Injection Systems

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

<sup>\*</sup> Except volunteer Roundup-Ready\* Corn.

#### **CDA** Equipment

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount recommended in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20% solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 mph (1 quart per acre). For the control of perennial weeds, apply a 20 to 40% solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mph (2 to 4 quarts per acre).

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

#### **CROPS**

This section is organized alphabetically by crop category. There may be several labeled crops listed in a crop category.

Unless otherwise specified, applications may be made to control any weeds listed in the annual, perennial and woody brush tables. Also refer to "SELECTIVE EQUIPMENT" section.

For any crop not listed in this "CROPS" section, applications must be made at least 30 days prior to planting.

For broadcast post-emergent treatments, do not harvest or feed treated vegetation for  $\theta$  weeks following application, unless otherwise specified.

When applying this product prior to transplanting crops into plastic mulch, residues must be removed from the plastic by at least 0.5 inches of water applied at one time via sprinkler irrigation or single natural rainfall event.

# Alfalfa, Clover, and Other Forage Legumes

LABELED CROPS: Alfalfa, clover, kudzu, lespedeza, lupin, sainfoin, trefoil, velvet bean, vetch, crown vetch, milk vetch

TYPES OF APPLICATIONS: Preplant, pre-emergence, at-planting, spot

treatment, wiper applications, renovation, preharvest.

#### Preplant, Pre-emergence, and At-planting

USE INSTRUCTIONS: This product may be applied before, during or after planting alfalfa and clover.

Applications must be made prior to emergence of the crop.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

#### Preharvest (Alfalfa only)

USE INSTRUCTIONS: This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds, including quackgrass, when applied prior to the harvest of the alfalfa. The treated crop and weeds can be harvested and fed to the livestock after 36 hours. Allow a minimum of 36 hours between application and harvest. Applications may be made at any time of the year. Make only one application to an existing stand of alfalfa per year, for control of quackgrass apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 1 quart of this product per acre as a preharvest treatment. Do not use alfalfa grown for seed, as a reduction in germination or vigor may occur.

#### Spot Treatment or Wiper Applications (Alfalfa and Clover only)

USE INSTRUCTIONS: This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label. Applications may be made in the same area at 30 day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than one-tenth of an acre should be treated at one time. Remove domestic livestock before application and wait 14 days after application bi-fore grazing livestock or harvesting.

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#### Renovation

USE INSTRUCTIONS: This product may be applied as a broadcast spray to existing stands of affalfa, clover, and other labeled forage legimes. Labeled crops may be planted into the treated area.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

#### Asparagus

TYPES OF APPLICATIONS: Preplant, pre-emergence, spot treatment, post harvest.

#### Preplant, Pre-emergence

USE INSTRUCTIONS: This product may be applied prior to the emergence of asparagus.

PRECAUTIONS, RESTRICTIONS: Do not apply within a week before the first spears emerge.

#### Spot Treatment

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

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested.

Do not harvest within 5 days of treatment.

#### **Postharvest**

USE INSTRUCTIONS: This product may be applied after the last harvest and all spears have been removed.

If spears are allowed to regrow, delay application until ferns have developed. Delayed treatments should be applied as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears.

PRECAUTIONS, RESTRICTIONS: Direct contact of the spray with the asparagus may result in serious crop injury. Select and use recommended types of spray equipment for post-emergence 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.

#### Cereal Crops

LABELED CROPS: Barley, Buckwheat, Millet (Pearl, Proso), Oats, Rice, Rye, Teosinte, Triticale, Wheat (All), Wild Rice

TYPES OF APPLICATIONS: Preplant, pre emergence, at planting, spot treatment (except rice), post-harvest, preharvest (wheat only), wiper applicators (wheat only)

Do not treat rice fields or levees when field contains flood water.

#### Preplant, Pre-emergence and At-planting

USE INSTRUCTIONS: This product may be applied before, during or after planting of cereal crops.

Applications must be made prior to emergence of the crop.

#### Spot Treatment (except rice)

USE INSTRUCTIONS: This product may be applied as a spot trealment in cereal crops, Apply this product before heading in small grains.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10% of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

#### **Postharvest**

USE INSTRUCTIONS: This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Do not harvest or feed treated vegetation for 8 weeks following application.

#### Preharvest (wheat only)

USE INSTRUCTIONS: This product provides weed control when applied prior to the harvest of wheat. Apply after the hard-dough stage of grain (30% or less grain moisture) and at least 7 days prior to harvest. Wheat stubble may be grazed immediately after harvest.

This product may be applied using either aerial or ground spray equipment, for ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 1 quart of this product per acre. Do not apply to wheat grown for seed, as a reduction in germination or vigor may occur.

#### Wiper Applications (wheat only)

USE INSTRUCTIONS: Wiper applications may be used in wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, when the rye is at least 6 inches above the wheat crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 35 days between application and harvest. Do not use roller applications.

#### Christmas Trees

TYPES OF APPLICATIONS: Post-directed, spot treatment, site preparation.

#### Post-directed, Spot Treatment

USE INSTRUCTIONS: This product may be used as a post directed spray and spot treatment around established Christmas trees.

PRECAUTIONS, RESTRICTIONS: Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN CHRISTMAS TREES. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established Christmas trees.

#### Site Preparation

USE INSTRUCTIONS: This product may be used prior to planting



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Christmas trees. PRECAUTIONS, RESTRICTIONS: Precautions should be taken to protect non target plants during site preparation applications.

#### Citrus Crops

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

TYPES OF APPLICATIONS: General weed control, middles (between rows of trees), strips (in row of trees), selective equipment

NOTE: FOR GENERAL USE DIRECTIONS, SEE THE "TREE, NUT AND VINE (GENERAL)" SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO CITRUS CROPS.

Florida and Texas only: For burndown or control of the weeds listed below, apply the recommended rates of this product in 3 to 30 gallions of water per acre. Where weed foliage is dense, use 10 to 30 gallions of water per acre.

For goats/ced, apply 2 to 3 quarts of this product per acre. Apply in 20 to 30 gallons of water per acre when plants are actively growing. Use 2 quarts per acre when plants are less than 8 inches tall and 3 quarts when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of Krovar<sup>1m</sup> II or Karmex<sup>1m</sup> may improve control. Refer to the Individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

#### **PERENNIAL WEEDS**

NOTE: S = Suppression PC = Partial Control	B = Burndown C = Control				
WEED SPECIES	Glyfos* 1 QT	X-TRA F 2 QT	A FLUID OZ/ACRE T 3 QT 5 QT		
Bermudagrass	в	-	PC	c	
Guineagrass					
Texas & Florida Ridge	В	(	C	C	
Florida Flatwoods	-	В	C	C	
				2	

#### **PERENNIAL WEEDS (continued)**

NOTE: S = Suppression PC = Partial Control	8 = Burndown C = Control			
WEED SPECIES	Glyfos* 1 QT		LUID OZ 3 QT	JACRE 5 QT
Paragrass	В	c	С	c
Torpedograss	\$	-	PC	C

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

# Conservation Reserve Program (CRP)

TYPES OF APPLICATIONS: Renovation (rotating out of CRP), site preparation, dormant, wiper.

#### Rotating out of CRP, Site Preparation

USE INSTRUCTIONS: This product may be used to prepare CRP land for crop production.

#### Dormant, Wiper

USE INSTRUCTIONS: This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 10 to 16 fluid ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after devirable grasses have reached dormancy.

PRECAUTIONS, RESTRICTIONS; Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.

#### Corn

TYPES OF CORN: Field corn, seed corn, sweet corn and popcorn.

TYPES OF APPLICATIONS, Preplant, pre-emergence, at planting, spot-treatment, post harvest.

#### Preplant, Pre-emergence and At-planting

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

The following tank mixtures may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre. For Southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. See the tables in the Annual Weeds section of this label for areas included in this recommendation.

ATRAZINE	EXTRAZINE	LOROX
BANVEL	FRONTIER	MARKSMAN
BICEP	GUARDSMAN	MICROTECH
BICEP II	HARNESS	PARTNER
BLADEX/CYANAZINE	HARNESS XTRA	PROWL
BROADSTRIKE	HARNESS XTRA 5.6	SIMAZINE
BULLET	LARIAT	SURPASS
DUAL	LASSO/ALACHLOR	SURPASS 100
DUAL II	LINEX	TOPNOTCH

For improved burndown, this product may be tank mixed with  $2.4 \cdot D$  or dicamba.

#### Annual Weeds

For difficult to control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania

smartweed up to 6 inches tall, apply this product at 2 pints per acre in these tank mixtures. For other labeled annual weeds, apply 1 to 1.5 pints of this product per acre when weeds are less than 6 inches tall, and 2 to 3 pints when weeds are over 6 inches tall.

PRECAUTIONS, RESTRICTIONS: Applications of 2,4-D or dicamba must be made at least 7 days prior to planning.

The tank mix recommendations in this section are not registered in California.

#### Spot Treatment

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

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside of target area for the same reason.

#### Post-harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-0 or dicambal may be used.

PRECAUTIONS, RESTRICTIONS: Do not harvest or feed treated vegetation for 8 weeks following application.

#### Cotton

TYPES OF APPLICATIONS: Preplant, pre-emergence, at-planting, hooded sprayer, selective equipment, spot treatment, preharvest.

#### Preplant, Pre-emergence, and At-planting

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

#### Hooded Sprayer, Selective Equipment

USE INSTRUCTIONS: This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton. Allow at least 7 days between application and harvest.

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PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment,

#### Spot Treatment

USE INSTRUCTIONS: For spot treatment, apply this product prior to boil opening of cotton.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10% of the total field area to be harvested. The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

#### Preharvest

USE INSTRUCTIONS: This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton, for weed control, apply at rates given in the annual, perennial and woody brush tables.

Apply 1 pint to 2 quarts of this product per acre for cotton regrowth inhibition. Allow a minimum of 7 days between application and harvest of cot-

This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water peracre. For aerial applications, apply this product in 3 to 10 gallons per acre.

Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could-affect maximum yield potential.

This product may be tank mixed with DEF 6, folex, or Prep to provide additional enhancement of cotton leaf drop.

PRECAUTIONS, RESTRICTIONS: Do not feed or graze treated cotton forage or hay following preharvest applications. DO NOT APPLY MORE THAN 1 QUART OF THIS PRODUCT PER ACRE BY AIR. Do not apply more than 2 quarts of this product per acre by ground. Do not apply to cotton grown for seed, as a reduction in germination or vigor may occur.

#### Fallow Systems

TYPES OF APPLICATIONS: Chemical fallow, pre-plant fallow beds, aid-totillage.

USE INSTRUCTIONS: This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label, applications must be made at teast 30 days prior to planting. This product may be used as a substitute for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Ground or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used.

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

Refer to specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if Banvel is applied within 45 days of planting.

#### Preplant Fallow Beds

USE INSTRUCTIONS: This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. For any crop not listed on this label; applications must be made at least 30 days prior to planting. This product will control weeds listed in the annual, perennial and woody brush tables.

In addition, 12 fluid ounces of this product plus 2 to 3 ounces of Goal 2XL per acre will control the following weeds with the maximum height or length indicated: 3" - common cheeseweed, chickweed, groundsel; 6" - London rocket, shepherdis purse.

16 fluid ounces of this product plus 2 to 3 ounces of Goat 2XL per acre will control the following weeds with the maximum height or length indicated: 6" - common cheeseweed, groundsel, marestail (Conyza canadensis), 12" - chickweed, London rocket, shepherdis purse.

#### Aid-to-Tillage

USE INSTRUCTIONS: This product may be used in conjunction with tillage practices in fallow systems or preplant to labeled crops to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 8 fluid ounces of this product in 3 to 10 gallons of water per acre. Make applications before weeds are 6 inches in height. Application must be followed by conventional tillage practices no later than 15 days after treatment and before regrowth occurs. Allow at least 1 day after application before tillage.

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PRECAUTIONS, RESTRICTIONS: Tank mixtures with residual herbicides may result in reduced performance.

#### Grain Sorghum (Milo)

TYPE OF APPLICATIONS: Preplant, pre-emergence, at-planting, spot treatment, wiper applications, post-harvest

#### Preplant, Pre-emergence, At-planting

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

#### Spot Treatment and Wiper Applications

USE INSTRUCTIONS: This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label.

PRECAUTIONS, RESTRICTIONS: For spot treatment, do not treat more than 10% of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

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

#### Post-Harvest

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

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth.

Apply 1 quart of this product per acre for control, or 1.5 pints of this product per acre for suppression.

PRECAUTIONS, RESTRICTIONS: Do not harvest or feed treated vegetation for 8 weeks following application.

#### **Grass Seed Production**

TYPES OF APPLICATIONS: Preplant, renovation, site preparation

USE INSTRUCTIONS: Applications may be made prior to planting or renovation of turf or forage grass areas grown for seed production. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application, for warm-season grasses, such as bermudagrass, summer or fall applications provide best control.

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

Do not feed or graze treated areas for 8 weeks following application.

#### Herbs

TYPES OF HERBS: Peppermint, spearmint

USE INSTRUCTIONS: This product may be used as a spot treatment in spearmint and peppermint. Apply a spray-to-wet with hand-held equipment, such as backpack and knapsack sprayers, pump-up pressure sprayers, handguns, hand wands or any other hand-held or motorized spray equipment used to direct the spray solution on to a limited area.

PRECAUTIONS, RESTRICTIONS: Allow at least 7 days between application and harvest. Further applications may be made in the same area at 30 day intervals. No more than one-tenth of any acre should be treated at one time. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for this reason.

#### **Pastures**

TYPES OF PASTURES: Bahiagrass, bermudagrass, bluegrass, brome, fescue, orchardgrass, ryegrass, timothy, wheatgrass, alfalfa and clover.

TYPES OF APPLICATIONS: Spot treatment, wiper application, preplant, pre-emergence, pasture renovation.

#### Spot Treatment and Wiper Application

USE INSTRUCTIONS: This product may be applied as a spot treatment or with wiper applicators in pastures.

Applications may be made in the same area at 30 day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than one-tenth of any acre should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

#### Preplant, Pre-emergence and Pasture Renovation

USE INSTRUCTIONS: This product may be applied prior to planting or emergence of forage grasses and legumes. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

#### **Peanuts**

TYPES OF APPLICATIONS: Preplant, pre-emergence, at-planting.

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

#### **Small Fruits and Berries**

LABELED CROPS: Blackberry, Blueberry, Boysenberry, Cranberry, Currant, Dewberry, Elderberry, Gooseberry, Huckleberry, Loganberry, Olallieberry, Raspberry (Black, Red), Youngberry

TYPES OF APPLICATIONS: Preplant, pre-emergence, directed spray (except Cranberry), wiper application.

USE INSTRUCTIONS: This product may be applied as a preplant or preemergence broadcast application or as a wiper application for crops listed in this section. Directed sprays may be applied to any crop except transerries.



For wick or wiper applicators, mix 1 gallon of this product in 4 gallons of water to prepare a 20% solution. In severe infestations, reduce equipment ground speed to ensure that adequate amounts of this product are wiped on the weeds. A second application in the opposite direction may be beneficial.

PRECAUTIONS, RESTRICTIONS: Do not permit herbicide solution to contact desirable vegetation, including green shoots, canes and foliage. Allow a minimum of 30 days between last application and harvest of cranberries. For other small fruits and berries, allow a minimum of 14 days between last application and harvest.

### Soybeans

TYPES OF APPLICATIONS: Preplant, pre-emergence, at-planting, spot treatment, preharvest, selective equipment, hooded sprayers.

#### Preplant, Pre-emergence and At-planting

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

The following tank mixtures may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

CANOPY	LASSO/ALACHLOR	PROWL
COMMAND	LINEX	PURSUIT
DUAL	LOROX/LINURON	PURSUIT PLUS
DUAL II	LOROX PLUS	SCEPTER
FRONTIER	MICRO-TECH	SENCOR/LEXONE
FUSION	PARTNER	SQUADRON
GEMINI	PREVIEW	TURBO

For improved burndown, this product may be tank mixed with 2,4-D or 2,4-DB. See the 2,4-D label for intervals between application and planting.

Annual weeds: For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches fall, and Pennsylvania smartweed up to 6 inches fall, apply this product at 2 pints per acre in these tank mixtures. For other labeled annual weeds, apply 1 to 1.5 pints of this product per acre when weeds are less than 6 inches tall, and 2 to 3 pints when weeds are over 6 inches tall.

PRECAUTIONS, RESTRICTIONS: The tank mix recommendations in this section are not registered in California.

#### Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to initial pod set in soybeans.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10% of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

#### Preharvesi

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans.

Apply at rates given in the annual, perennial and woody brush tables. This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

Apply after pods have set and lost all green color. Allow a minimum of 7 days between application and harvest of soybeans. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

PRECAUTIONS, RESTRICTIONS: Do not graze or harvest treated crop for livestock feed within 25 days of last preharvest application. DO NOT APPLY MORE THAN 6 QUARTS PER ACRE OF THIS PRODUCT FOR PREHARVEST APPLICATIONS. DO NOT APPLY MORE THAN 1 QUART OF THIS PRODUCT PER ACRE BY AIR. Do not apply to soybeans grown for seed as a reduction in germination or vigor may occur.

#### Selective Equipment

USE INSTRUCTIONS: This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

### Sugarcane

TYPES OF APPLICATIONS: Preplant, pre-emergence, spot treatment, fallow, hooded sprayers.

#### Preplant, Pre-emergence

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

PRECAUTIONS, RESTRICTIONS: Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

#### Spot Treatment

USE INSTRUCTIONS: This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a 1% solution of this product in water and spray to wet foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.

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

#### **Fallow Treatments**

USE INSTRUCTIONS: This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ration cane. For removal of last stubble of ration cane, apply 4 to 5 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves. Allow 7 or more days after application before tillage.

#### **Hooded Sprayers**

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between rows of sugarcane. A hooded sprayer is a type of shielded applicator. The spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution.

Minimize the potential for spray particles to escape from under the hood by operating the sprayer at appropriate ground speeds, nozzle pressures and wind speeds. Operation on rough or sloping ground may result in spray particles escaping from the hood.

When applying to sugarcane that is grown on raised beds, ensure that the hood is designed to completely enclose the spray. If necessary, extend the

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front and rear flaps of the hoods to reach the ground in furrows between the rows.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting the crop. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. SUCH DAMAGE SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICATOR.

PRECAUTIONS, RESTRICTIONS: Do not allow treated weeds to come in contact with the crop. Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction.

## Sunflowers

TYPES OF APPLICATIONS: Preplant, pre-emergence.

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

PRECAUTIONS, RESTRICTIONS: Do not apply more than 1 quart of this product per acre of sunflowers. Make only one preplant or pre-emergent application per year. Do not feed or graze sunflower forage following application of this product.

## Tree, Nut and Vine Crops (General)

TYPES OF APPLICATIONS: General weed control, middles (between rows of trees), strips (in rows of trees), selective equipment (except kiwi), perennial grass suppression.

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL CITRUS CROPS, TREE FRUITS, TREE NUTS AND VINE CROPS. SEE THE INDIVIDUAL CROP SECTIONS FOR INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS.

This product may be applied in middles, strips or for general weed control in established citrus groves, tree fruit and tree nut orchards and vineyards. Apply 1 pint to 5 quarts per acre. Repeat applications may be made up to a maximum of 10.6 quarts per acre per year. This product may also be used for site preparation prior to transplanting these crops. Allow a minimum of 3 days between application and transplanting. Applications may be made

with boom equipment, CDA, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper applicator equipment, except as directed.

#### Middles (between rows)

USE INSTRUCTIONS: This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled trees and wine crops. If weeds are under drought stress, trigate prior to application, Reduced control may result if weeds have been mowed prior to application.

A tank mixture of this product plus Goal 2XL may be used for annual weeds in middles between rows of citrus crops, tree fruits, tree nuts and vine crops. This mixture is recommended when weeds are stressed or growing in dense populations. 16 to 32 oz/A of this product plus 3 to 12 oz/A of Goal 2XL will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, hairy fleabane (Conyza bonariensis), common ground-sel, junglerice, common lambsquariers, redroot pigweed, London rocket, common ryegrass, shepherdis-purse, annual sowihistle, common cheeseweed (malva), fifaree (suppression), horseweed/marestait (Conyza canadensis), stinging nettle and common purslane (suppression). 12 to 32 oz/A of Goal 2XL will control common cheeseweed (malva) with a maximum height or diameter of 3 inches.

#### Strips (in rows)

USE INSTRUCTIONS: This product may be applied in rows of tree or vine crops and may also be tank mixed with the following products:

DEVRINOL 50 DF	PRINCEP CALIBER S
DIREX 4 L	SIMAZINE 4 L
GOAL 2XL	SIMAZINE BOW
KARMEX DF	SIM-TROL 4L
KROVAR I	SOLICAM DE
KROVAR II	SURFLAN AS
PROWt	SHRELAN 75W

Do not apply these tank mixtures in Puerto Rico.

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

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Apply 1 pint to 5 quarts of this product per acre in these tank mixtures. Use rates at the higher end of the recommended rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall.

#### Perennial Grass Suppression

This product will suppress perennial grasses such as bahiagrass, bermudagrass, tall fescue, orchardgrass, Kentucky bluegrass, and quackgrass that are grown as ground covers in tree and vine crops.

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 8 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 6 fluid ounces of this product per acre. Do not add ammonium sulfate.

For best results, mow cool season grass covers in the spring to even their height and apply this product 3 to 4 days after mowing.

For suppression of vegetative growth and seedhead inhibition of bahlagrass for approximately 45 days, apply 6 fluid ounces of this product in 10 to 25 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 4 fluid ounces of this product per acre, followed by an application of 2 to 4 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of bermudagrass, apply 1 to 2 quarts of this product in 3 to 20 gallons of water per acre. Use this treatment only if reduction of the bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

for suppression of bermudagrass, apply 6 to 16 fluid ounces of this product per acre east of the Rocky Mountains and 16 fluid ounces of this product to the west of the Rocky Mountains. Apply in a total spray volume of 3 to 20 gallons per acre, no sooner than 1 to 2 weeks after full green-up. If the bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when regrowth occurs and bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, rates of 6 to 10 fluid ounces per acre should be used in shaded conditions or where lesser degree of suppression is desired.

Shielded and wiper applications may be used in tree crops and grapes. Refer to individual crop sections for time interval between application and harvest.

GENERAL PRECAUTIONS/RESTRICTIONS: For all uses in this section.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBI-CIDE SOLUTION, SPRAY, DRIFT OR MIST WITH FOLIAGE OR GREEN BARK OF TRUNK, BRANCHES, SUCKERS, FRUIT OR OTHER PARTS OF TREES AND VINES. CONTACT OF THIS PRODUCT WITH OTHER THAN MATURED BROWN BARK CAN RESULT IN SERIOUS CROP DAMAGE.

AVOID PAINTING CUT STUMPS WITH THIS PRODUCT AS INJURY RESULTING FROM ROT GRAFTING MAY OCCUR IN ADJACENT TREES.

#### Tree Fruits

LABELED CROPS: Apple, Apricot, Cherry (Sweet, Sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (All), Quince

TYPES OF APPLICATIONS: General weed control, middles (between rows of trees), selective equipment.

NOTE: FOR GENERAL USE DIRECTIONS, SEE THE "TREE, NUT AND VINE (GENERAL)" SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO TREE FRUITS.

#### Restrictions on Application Equipment

For cherries, any application equipment listed in this section may be used in all states.

For citron and olives, apply as a post-directed spray only.

Any application equipment listed in this section may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except 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, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with

a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bank of trees. Apply no later than 90 days after first bloom.

Applications made after this time may result in severe 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.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest for apple, crabapple, loquat, mayhaw, pear and quinte.

Allow a minimum of 17 days between last application and harvest for apricot, cherry, nectarine, olive, peach and plum/prune.

#### Tree Nuts

LABELED CROPS: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory nut, Macadamia, Pecan, Pistachio, Walnut (Black, English)

TYPES OF APPLICATIONS: General weed control, middles (between rows of trees), strips (in row of trees), selective equipment

NOTE: FOR GENERAL USE DIRECTIONS, SEE THE "TREE, NUT AND VINE (GENERAL)" SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO TREE NUTS.

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

# **Tropical Crops**

LABELED CROPS: Atemoya, Avocado, Banana, Barbados Cherry (acerola), Breadfruit, Canistel, Carambola, Cherimoya, Cocoa beans, Coconuts, Coffee, Dates, Figs, Guava, Jaboucaba, Jackfruit, Longan, Lychee, Mango, Marmaladebox (genip), Papaya, Passion fruit, Persimmon, Pineapple, Plantain, Pomegranate, Sapodilla, Sapote (black, marney, white), Soursop, Sugar apple, Tamarind, Tea.

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USE INSTRUCTIONS. This product may be applied for general weed control or for site preparation prior to transplanting crops listed in this section. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 14 days between last application and harvest of acerola, atemoya, avocado, breadfruit, canstel, carambola, chenmoya, cocoa beans, coconuts, dates, figs, genip, jaboticaba, jackfruit, longan, lychee, mango, mayhaw, passion fruit, persimmon, pomegranate, sapodilla, sapote, soursop, sugar apple, tamannd and tea.

Allow a minimum of 28 days between last application and harvest of plantain and coffee.

Allow a minimum of 1 day between last application and harvest of banana, guava and papaya.

Do not feed or graze treated pineapple forage following application.

## **Vegetable Crops**

EABELED CROPS: Amaranth, Arugula, Aruchoke (Jerusalem), Beans (All), Beet greens, Garden Beets, Broccoli (All), Brussels sprouts, Cabbage (All), Cabbage (Chinese), Cantaloupe, Cardoon, Cavalo Broccolo, Carrot, Cauliflower, Casaba melon, Celery, Celery (Chinese), Celeriac, Celtuce, Chard (Swiss), Chayote, Chervil, Chick peas, Chicory, Chrysanthemum, Collards, Corn salad, Crenshaw melon, Cress, Cucumber, Dandelion, Dock (sorrel), Eggplant, Endive, Fennel (florence), Garlic, Gherkin, Ginseng, Gourds, Ground cherry, Guar, Honeydew melon, Honey ball melon, Horseradish, Kale, Kohlrabi, Leek, Lentils, Lettuce, Mango melon, Melons, (All), Mizuna, Muskmelon, Mustard greens, Okra, Onion, Oriental radish, Parsley, Parsnips, Peas (All), Pepinos, Pepper (All), Persian melon, Potato (Irish), Pumpkin, Purslane, Radish, Rape greens, Rhubarb, Rutabaga, Salsify, Shallot, Spinach (All), Mustard Spinach, Squash (Summer, Winter), Sugar beets, Sweet potato, Tomatillo, Tomato, Turnip, Watercress, Watermelon, Yams.

USE INSTRUCTIONS: This product may be applied prior to the emergence of direct seeded vegetables or prior to transplanting vegetables.

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting crops into plastic mulch, care must be taken to remove

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residues of this product from the plastic prior to transplanting. Residues must be removed by a single 0.5 inch natural rainfall event or by applying at least 0.5 inch of water via a sprinkler system.

For the following crops, apply only prior to planting. Allow at least 3 days between application and planting of cantaloupe, casaba melon, crenshaw meion, cucumber, eggplant, garlic, gherkin, gourds, ground cherry, honeydew melon, honey ball melon, mango melon, melons (all), muskmelon, pepper (all), persian meion, pumpkin, squash (summer, winter), tomatillo, tomato, watercress, and watermelon.

Wiper applications may be used in rutabagas. Allow at least 14 days between application and harvest.

## **Vine Crops**

LABELED CROPS: Grapes (raisin, table, wine), Kiwi fruit TYPES OF APPLI-CATIONS: General weed control, middles (between rows), strips (in rows), selective equipment.

NOTE: FOR GENERAL USE DIRECTIONS, SEE THE "TREE, NUT AND VINE (GENERAL)" SECTION. THE FOLLOWING DIRECTIONS ARE SPE-CIFIC TO VINE CROPS.

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

In the Northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make applications with shielded sprayers or wiper equipment.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 14 days between last application and harvest.

#### **Farmsteads**

TYPES OF APPLICATIONS: General non-selective weed control, trim-andedge, chemical mowing, cut stumps, habitat management.

#### General Non-selective Weed Control, Trim-and-edge

USE INSTRUCTIONS: This product may be used to control annual weeds, perennial weeds and woody brush which are found in any part of the farm-



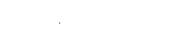












stead, including building foundations, along and in fences, in dry ditches and canals, along ditch banks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

This product may be tank mixed with the following products. Refer to these product labels for approved farmstead sites and application rates. For annual weeds, use 1 quart per acre of this product when weeds are less than 6 inches tall and 1,5 quarts per acre when weeds are greater than 6 inches tall. For perennial weeds, apply 2 to 5 quarts per acre in these tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the "HAND-HELD AND HIGH VOLUME EQUIPMENT" section of this label for recommended rates.

Banvel	Simazine 80V
Diuron	Surflan 75W
Princep Caliber 90	Surflan AS
Simazine	2.4·D
Simazine 4L	

Banvel and 2,4-D mixtures may not be applied by air in California.

#### Chemical Mowing

USE INSTRUCTIONS: This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Apply this product at a rate of 6 to 8 fluid ounces per acre. Use 8 fluid ounces of this product per care when treating tail fescue, fine fescue, orchardgrass or quackgrass covers. Use 6 fluid ounces of this product per acre when treating Kentucky bluegrass. Apply treatments in 10 to 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads.

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

#### Cut Stumps

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

USE INSTRUCTIONS: This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure cov-

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

Alder Eucalyptus Salt cedar Sweetgum

Eucalyptus Madrone

Tan oak Willow

Oak Reed, giant

PRECAUTIONS, RESTRICTIONS: DO NOT MAKE CUT STUMP APPLI-CATIONS WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP.

INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT WOODY BRUSH OR TREES.

# Habitat Management

TYPES OF USES: Habitat restoration and maintenance, wildlife food plots.

#### Habitat Restoration and Maintenance

USE INSTRUCTIONS: This product may be used to control exotic and other undesirable vegetation in habitat management areas. Applications can be made only to allow recovery of native plant species, prior to planting desirable native species, and for similar broadspectrum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement. The tank mixtures listed in this section of the label may be used for habitat restoration and maintenance.

#### Wildlife Food Plots

USE INSTRUCTIONS: This product may be used as a site preparation treatment to control annual and perennal weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage.

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#### **NON-CROP USES**

See "GENERAL INFORMATION" and "MIXING, ADDITIVES and APPLI-CATION INSTRUCTIONS" sections of this label for essential product performance information and the following "NON-CROP" sections for specific recommended uses.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODT ROOTS OR FRUIT OF CROPS, DESIRABLE TURFGRASSES, TREES, SHRUBS OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seeds.

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

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

# Industrial, Recreational and Public Areas

When applied as directed for "NON-CROP USES," under conditions described, this product controls annual and perennial weeds listed on this label growing in areas such as airports, ditch banks, dry ditches, dry canals, fencerows, golf courses, highways, industrial plant sites, lumber yards, parking areas, parks, petroleum tank farms and pumping installations, pipelines, power and telephone rights-of-way, railroads, roadsides, schools, storage areas, utility substations, other public areas and similar industrial or non-crop areas.

For specific rates of application and instructions for control of various annual and perennial weeds and woody brush and trees, see the "WEEDS CONTROLLED" section of this label.

This product may be applied with recirculating sprayers, shielded applicators, or wiper applicators in any noncrop site specified on this label. See the Selective Equipment part of "APPLICATION EQUIPMENT and TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

# Tank Mixtures for Industrial Sites and Forestry Site Preparations

Glyfas X-TRA plus OUST'M

Use on industrial sites including airports, industrial plants, lumberyards, petroleum tank farms, pumping stations, pipelines, railroads, roadsides, storage areas or other similar sites where bare ground is desired.

This tank mixture may also be used as a site preparation treatment for sites to be planted to jack pine, loblolly pine, red pine, slash pine, and Virginia pine.

When applied as directed for "NON-CROP USES" under the conditions described, this product plus Oust provides control of annual weeds listed in the "WEEDS CONTROLLED" section of the label for this product and Oust, and control or partial control of the perennial weeds listed below.

Apply 1 to 2 quarts of this product with 2 to 4 ounces of Oust in 10 to 40 gallons of spray solution per acre as a broadcast spray to actively growing weeds.

This mixture may be applied by aerial equipment in site prepiliperations. When applied by air, use the recommended rates in 5 to 15 gallons of spray solution per acre.

This product plus Oust tank mixtures may not be applied by air in California.

for control of annual weeds, use the lower rates of these product,

For control of the listed perennial weeds, use the higher rates of both products. For partial control, use the lower rates.

Bahiagrass

Paspalum notatum

Bermudagrass\*
Cynodon dactylon

Cynodon dactylon

Broomsedge Andropogon virginicus

Dock, curly Rumex crispus Dogfennel

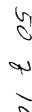
Eupatorium capilliforium

Fescue, tall

Festuca arundinacea

Johnsongrass\*\*
Sorghum halepense

Poorjoe\*\*
Diodia teres



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Quackgrass

Vaseygrass

Agropyron repens

Paspalum urvillei

Trumpetcreeper\*
Campsis radicans

Vervain, blue Verbena hassata

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

#### Tank Mixtures for Non-crop Sites

When applied as a tank mixture, this product provides control of the emerged annual weeds and partial control of the emerged perennial weeds listed in this label. When applied as a tank mixture, the following residual herbicides will provide preemergence control of the weeds listed in the individual product labels:

Glyfos X-TRA plus DIURON
Glyfos X-TRA plus KROVAR™ I
Glyfos X-TRA plus KROVAR II
Glyfos X-TRA plus KROVAR II
Glyfos X-TRA plus RONSTAR™ 50WP
Glyfos X-TRA plus SIMAZINE 4E
Glyfos X-TRA plus SIMAZINE 80W
Glyfos X-TRA plus SURFLAN™ 75W
Glyfos X-TRA plus SURFLAN AS

When tank mixing with residual herbicides, add an agriculturally approved nonionic surfactant at 0.5 to 1 percent by volume of spray solution. See the "MIXING, ADDITIVES and APPLICATION INSTRUCTIONS" section of this label before preparing these tank mixtures.

Read and carefully observe the label claims, cautionary statements, recommended use rates and all other information on the labels of all products used in these tank mixtures. Use according to the most restrictive label directions for each product in the mixture.

#### Control of Emerged Weeds

Annual Weeds - Apply 1 quart per acre of this product in these tank mixtures when weeds are less than 6 inches tall and 1.5 quarts per acre when

<sup>\*</sup>Suppression at the higher rates only.

<sup>\*\*</sup>Control at the lower rates.

weeds are more than 6 inches tail.

Perennial Weeds – For partial control of perennial weeds using these tank mixtures, apply 2 to 5 quarts per acre of this product. Follow the recommendations in the "WEEDS CONTROLLED" section of this label for stage of growth and rate of application for specific perennial weeds.

#### Preemergence Weed Control

for preemergence weed control, refer to the individual product labels for specific non-crop sites, rates, carrier volumes, and precautionary statements.

Mix only the quantity of spray solution which can be used during the same day. Do not allow these tank mixtures to stand overnight as this may result in reduced weed control.

APPLY THESE TANK MIXTURES THROUGH CONVENTIONAL BROAD-CAST EQUIPMENT ONLY.

#### Farm Ditches

This product will suppress perennial grasses along farm ditches. Apply this product at a rate of 6 to 8 fluid ounces per acre. Use 8 fluid ounces per acre when treating tall (coarse) fescue, fine fescue, orchardgrass, or quackgrass covers. For best suppression of these species, add ammonium sulfate at a rate of 1.7 pounds per 10 gallons of spray solution. Use 6 fluid ounces per acre without ammonium sulfate when treating Kentucky bluegrass.

Apply treatments in 10 to 20 gallons of spray solution per acre to actively growing perennial grass covers. For best spray distribution and coverage, use flat fan nozzles.

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

Where broadleaf weed control or suppression is desired, tank mix this product with an appropriate, labeled broadleaf weed herbicide.

# Habitat Management

This product is recommended for the restoration and/or maintenance of native habitats and in wildlife management areas. Apply as recommended in the "NON-CROP USES" section of this label.

Habitat Restoration and Maintenance - When applied as directed, exotic

and other undesirable vegetation may be controlled in habital management areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broadspectrum vegetation control requirements in habital management areas. Spot treatments can be made to selectively remove unwanted plants for habital maintenance and enhancement. For spot treatments, care should be exercised to keep spray off of desirable plants.

Wildlife Food Plots - This product may be used as a site preparation treatment prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If fillage is needed to prepare a seedbed, wait 7 days after applying this product before tilling.

#### **Ornamentals and Christmas Trees**

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

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

When applied as instructed for the conditions described for "NON-CROP USES," this product controls undesirable vegetation listed on this label prior to planting, within and around greenhouses and shadehouses, and as a post-directed spray around established ornamentals and Christmas trees.

For specific rates of application and instructions for control of various annual and perennial weeds, see the "WEEDS CONTROLLED" section of this label.

Where repeat applications are necessary, do not exceed 10.6 quarts of this product per acre per year.

Site Preparation ~ Following preplant applications of this product, any ornamental or Christmas tree species may be planted. Precautions should be taken to protect nontarget plants during site preparation applications.

Greenhouse/Shadehouse Use - This product may be used to control weeds listed on this label which are growing in greenhouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

Post-directed Spray - Use as a post-directed spray around established woody ornamental species or Christmas trees such as those listed below. Care must be exercised to avoid contact of spray, drift or mist with foliage of or green bank of established ornamental species.

Arborvitae Thuja spp. Lilac

Azalea

Syringa spp.

Magnolia

Rhododendron spp.

Magnolia spp.

Boxwood Buxus spp. Maple Acer spp.

Crabapple Malus spp.

Oak Quercus spp.

Euonymus spp.

Privet

Fir

Ligustrum spp. Pine

Abies spp.

Pinus spp.

Pseudotsuga spp.
Hollies

Spruce Picea spp.

llex spp.

Yew Taxus spp.

Jojoba Simmondsia chinensis

> Silvicultural Sites and Rights-of-Way

NOTE: NOTE RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN SILVICULTURAL NURSERIES.

When applied as directed for "NON-CROP USES" under conditions described, this product controls undesirable vegetation listed on this label. This product also suppresses or controls undesirable vegetation listed on this label when applied at recommended rates for release of established conferous species listed on this label.

For specific rates of application and instructions for control of various brush, annual and perennial weeds, see the "WEEDS CONTROLLED" section of this label. For specific rates of application for release of listed conferous

species, see the "CONIFER RELEASE" part of this section of the label.

Where repeat applications are necessary, do not exceed 10.6 quarts of this product per acre per year.

Aerial Applications - This product may be applied using aerial spray equipment for silvicultural site preparation, conifer release and rights-of-way treatments. See the "APPLICATION INSTRUCTIONS" section of this label for information on how to apply this product by air.

DO NOT APPLY THIS PRODUCT BY AIR TO RIGHTS-OF-WAY SITES IN THE STATE OF CALIFORNIA.

To reduce the aerial application drift hazard to aquatic sites\*, to nontarget sites or any site containing desirable vegetation, always maintain appropriate buffer zones. A buffer zone of the following minimum distances should be maintained:

- Helicopters using a Microfoil<sup>TM</sup> boom, a Thru-Valve<sup>TM</sup> boom (TVB-45), or equivalent drift control systems, should maintain at least a 50-foot buffer zone.
- . When using other aerial equipment:
- Maintain at least a 75-foot buffer zone for applications using 2 quarts or less per acre of this product.
- Maintain at least a 125-foot buffer zone for applications using more than 2 quarts per acre of this product.
- Maintain at least a 500-foot buffer zone for applications on rights-of way when applied from 75 feet or more above ground level

These distances should be increased if conditions favoring drift exist.

\*Aquatic sites include all lakes, ponds and streams used for for significant domestic purposes or angling.

#### Site Preparation

Following preplant applications of this product, any silvicultural species may be planted.

#### Post-directed Spray

In establishing silvicultural sites, use as a spray on the foliage of undesirable

vegetation. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bank of desirable species.

#### Conifer Release

For release, apply only where conifers have been established for more than one year. Vegetation should not be disturbed prior to treatment or until visual symptoms appear after treatment. Symptoms of treatment are slow to appear, especially in woody species treated in late fall. Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher rates are applied or when applications are made during periods of active conifer growth. Do not use additional surfactant with conifer release applications.

Applications must be made after formation of final conifer resting buds in the fall or prior to initial bud swelling in spring. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Use the following rates for conifer release to control or partially control the weeds listed in the "WEEDS CONTROLLED" section of this label.

For release of the following conifer species:

Douglas fir

Pines\*

Pseudotsuga menziesii

Pinus spp.

Fir Abies spp. Spruce Picea sop.

Hemlock

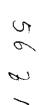
Tsuga spp.

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

Apply 1.5 to 2 quarts of this product per acre except in Washington and Oregon, west of the crest of the Cascade Mountains. For spring treatments west of the crest of the Cascade Mountains, apply 1 quart of this product per acre before conifer bud swell for control of annual weeds. For fall treatments in Washington and Oregon, west of the crest of the Cascade Mountains, apply 1 to 1.5 quarts of this product per acre before any major leaf drop of deciduous species.

For release of western hemlock, apply 1 quart of this product per acre.

For release of the following conifer species:



Loblolly pine Pinus taeda Slash pine Pinus elliottii

Eastern white pine

Pinus strobus

Late Season Application – Apply 1.5 to 2 quarts of this product in a minimum of 5 gallons of spray solution per acre during early autumn. Applications made prior to September 1 or when conditions are conducive to rapid growth of confers will create the potential for increased injury in the form of tip and/or needle burn. Injury may decrease with later applications. Some autumn colors are acceptable at time of application. Apply prior to frost or leaf drop of undesirable plants.

Applications made according to label directions will release lobloily pine, eastern white pine and slash pine by reducing competition from the following species:

Ash

Fraxinus spp.

Cherry: Black

Prunus serotina

71n

Prunus pensylvanica

**Elm** Ulmus spp.

Hawthorn Crataegus spp.

Locust, black

Robina pseudoacacia Maple, red

Acer rubra
Oak

Black Quercus velutina

Post

Quercus stellata Southern red Quercus faicata Oak (cont.)

White

Quercus alba

Persimmon Diospyros spp.

Poplar, yellow Linodendron tuliplera

Sassafras Sassafras albidum

Sourwood

Oxydendrum arboreum

Sumac: Poison Rhus vernix Smooth Rhus glubra Winged Rhus copallina

Sweetgum

Liquidambar styraciflua

Apply only to those sites where woody brush and trees listed in this label constitute the majority of the undesirable species

#### Glyfos X-TRA plus Oust Tank Mixtures for Conifer Release from Herbaceous Weeds

To release loblolly pines from herbaceous weeds, tank mixtures of this product with Oust will provide control of annual weeds listed in the "WEEDS CONTROLLED" section of this and the Oust label, and partial control of the perennial weeds listed below.

Apply 16 to 24 fluid ounces of this product with 2 to 4 ounces of Oust in 10 to 30 gallons of spray solution per acre. Make application to actively growing weeds as a broadcast spray over the top of the young loblolly pines.

This product plus Oust tank mixtures may not be applied by air in California.

This tank mixture may be applied using aerial equipment. When applying by air, use the recommended rate in 5 to 15 gallons of spray solution per acre.

For control of annual weeds below 12 inches in height (or runner length on annual vines), use the lower rates of both products. Use the higher rates of both products when annual weeds are in more advanced stages of growth and approaching flower or seed formation.

Use the higher rates of both products for partial control of the following perennial weeds. Use the lower rates for suppression of growth.

Bahiagrass Paspalum notatum Johnsongrass\* Sorghum halepense

Broomsedge

Poor oe\*

Andropogon virginicus

Diodia teres

Dock, curly Rumex crispus Trumpetcreeper\* Campsis radicans

Dogfennel Eupatorium capilliforium Vaseygrass

Paspalum urvillei

Fescue, tall

Vervain, blue

Festuca arundinacea Verbena hastata

\*Control at the higher rates.

Pine damage may occur or can be accentuated if treatment takes place when

<sup>\*\*</sup>Suppression at the higher rates only.

young trees are under stress from drought, flood water, insects or disease.

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

#### **NOTE TO USER**

This product must not be used in areas where adverse impact on federally designated endangered/threatened plant or aquatic species is likely.

Prior to making applications, the user of this product must determine that no such species are located in or immediately adjacent to the area to be treated.

#### **Cut Stump Treatments**

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

When used according to directions for cut stump application, this product will CONTROL, PARTIALLY CONTROL or SUPPRESS many types of woody brush and tree species, some of which are listed below:

Alder Alnus spp. Saltcedar Tamarisk spp.

Eucalyptus

Sweetgum

Eucalyptus spp.

Liquidambar styraciflua

Madrone

Tan oak

Arbutus menziesii

Lithocarpus densiflorus

Oak Ouercus son Willow Salix spp.

Quercus spp.

Reed, giant Arundo donas

#### Injection and Frill Applications

Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment which must penetrate into the living bissie. Apply the equivalent of 1 mi of this product per each 2 to 3 inches of trunk diameter (DBH). This is best achieved by applying a 50 to 100 percent concentration of this material either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow runoff to occur from frill or cut areas in species that exude sap freely after frills or cutting. In species such as this, make frill or cut at an oblique angle so as to produce a cupping effect and use undiluted material. For best results, application should be made during periods of active growth and after full leaf expansion.

This treatment WILL CONTROL the following woody species:

Oak

Sweetgum

Quercus spp.

Liquidambar styraciflua

Poplar Populus spp. Sycamore Platanus occidentalis

This treatment WILL SUPPRESS the following woody species:

Black gum

Hickory

Nyssa sylvatica Dogwood Carya spp.

Cornus spp.

Maple, red

# Turfgrasses and Grasses for Seed Production

#### Preplant and Renovation

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

For specific rates of application and instructions for control of various annu-

al and perennial weeds, and woody brush and trees, see the "WEEDS CONTROLLED" section of this label.

For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as bermudagrass, summer or fall applications provide best control.

DO NOT DISTURB SOIL OR UNDERGROUND PLANT PARTS BEFORE TREATMENT. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts.

#### **TURFGRASSES**

Where existing vegetation is growing in a field or unmowed situation, apply this product to actively growing weeds at the stages of growth listed in the "WEEDS CONTROLLED" section of this label.

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

Desirable turigrasses may be planted following the above procedures.

#### **GRASSES FOR SEED PRODUCTION**

Apply this product to actively growing weeds at the stages of growth recommended in the "WEEDS CONTROLLED" section of this label prior to planting or renovation of turf or forage grass areas grown for seed production.

DO NOT feed or graze treated areas within 8 weeks after application.

# Annual Weed Control in Dormant Bermudagrass and Bahiagrass Turf

When applied as directed for "NON-CROP USES" under the conditions described, this product will provide control or suppression of many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahagrass turf. Refer to the rate table for Glyfos X-TRA alone under the "RELEASE OF BERMUDAGRASS and BAHIAGRASS" section of this label for recommended rates and volumes on the species to be suppressed or controlled. Treat only when turf is dormant and prior to spring greenup.

Spot treatments or broadcast applications of this product in excess of 16 fluid ownces per acre may result in injury or delayed greenup in highly maintained turfgrass areas; i.e., golf courses, lawns, etc. DO NOT APPLY TANK MIXTURES of this product plus Oust in highly maintained turfgrass areas.

# Release of Bermudagrass or Bahiagrass

NOTE: Use only in areas where bermudagrass or bahagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. Use tank mixtures of this product plus Oust only on railroads, highways, utility plant sites, or other right-of-way areas.

When applied as directed for "NON-CROP USES" under the conditions described, this product will provide control or suppression of many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. This product may be tank-mixed with Oust as recommended for residual control. Make applications to dormant bermudagrass or bahiagrass. Tank mixtures of this product plus Oust may delay greenup. To avoid delays in greenup and minimize injury, do not add more than 1 ounce per acre of Oust on bermudagrass or more that 0.5 ounce per acre on bahiagrass, or treat when these grasses are in a semi-dormant condition.

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

#### Weeds Controlled

Rate recommendations for control or suppression of winter annuals and tall fescue are listed below:

Apply the recommended rates of this product 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.

For the best recommendation for the mixture of weeds within your geographic area, contact your sales representative.



# Weeds Controlled or Suppressed with Glyfos X-TRA alone\*

NOTE: C = Control
S = Suppression

Glyfos <sup>o</sup> X-TRA FLUID OZ/AC 8 12 16 24 32						
S	c	С	c	C	C	
S	C	C	C	C	С	
S	C	C	C	C	C	
\$	С	C	С	C	C	
S	C	C	C	C	C	
•	\$	\$	C	C	C	
•	S	S	C	C	С	
٠	•	•	•	\$	\$	
•	•	\$	\$	C	C	
•	\$	C	C	С	C	
•	•	S	C	C	C	
\$	C	C	C	C	C	
•	•	\$	С	C	C	
	\$ S S S S S S S S S S S S S S S S S S S	8 12 S C S C S C S C S C S C	8 12 16 S C C S C C S C C S C C S C C S C C S C C S C C S C C S C C S S S S S	8 12 16 24         S C C C         S C C C         S C C C         S C C C         S C C C         S C C C         S S C C         S S C C         S C C C         S C C C         S C C C         S C C C	8         12         16         24         32           S         C         C         C         C           S         C         C         C         C           S         C         C         C         C           S         C         C         C         C           S         S         C         C         C           S         S         C         C         C           S         C         C         C         C           S         C         C         C         C           S         C         C         C         C           C         C         C         C         C           C         C         C         C         C           C         C         C         C         C	

<sup>\*</sup>These rates apply only to sites where an established competitive turf is present.

# Weeds Controlled or Suppressed with Glyfos X-TRA plus OUST\*

NOTE: C = Control S = Suppression

	- F F	Glylos* X-TRA + OUST						
WEED SPECIES	Glyfos* X-TRA (FL. OZ/A) + OUST (OZ/A)	8 + 1/4	12 + 1/4	12 + 1/2	16 + 1/4	16 + 1/2	12 +	16 +
Barley, litt Hordeum pus		c	C	С	С	C	C	C
Bedstraw, Galium apani	catchweed e	c	C	C	C	C	C	C
Bluegrass, Poa annua	annual	\$	C	C	C	Ç	C	C
Chervil Chaerophyllu	m tainturieri	C	C	C	С	C	C	C
Chickweer Stellaria medi	d, common a	S	C	C	C	C	C	C
<b>Clover,</b> cri Trifolium inca		S	S	\$	\$	C	C	C
Clover, lai Trifolium can		•	•	\$	S	\$	C	C
Fescue, ta festuca arund		•	•	•	•	•	\$	\$
Geranium Geranium cai	, Carolina rolinianum	•	S	S	C	C	С	С
Henbit Lamium amp	lexicaule	•	5	C	C	C	С	C
Ryegrass, Lolium multil		•	\$	\$	C	¢	С	C

# Weeds Controlled or Suppressed with Glyfos X-TRA plus OUST\* (cont.)

NOTE: C = Control
S = Suppression

Glyfos\* X-TRA + OUST

		· W	00,	•				
WEED SPECIES	Glyfos* X-TRA (FL, OZ/A) + OUST (OZ/A)	+	12 + 1/4	12 + 1/2	16 + 1/4	16 + 1/2	12 +	16 + 1
Speedwell Veronica arv		s	С	С	C	С	С	С
Vetch, co	mmon	C	C	C	C	C	C	C

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

#### Release of Actively Growing Bermudagrass

When applied as directed, this product will aid in the release of bermudagrass by providing control of annual species listed in the "WEEDS CON-TROLLED" section of this and the Oust label, and suppression or partial control of certain perennial weeds.

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

Use the higher rate of this product for partial control of the following perennial species. Use the lower rate for suppression of growth. For best results, see the "WEEDS CONTROLLED" section of this label for proper stage of growth.

Bahiagrass Paspalum notatum Johnsongrass\* Sorghum halepense

65 7 100

Bluestem, silver Andropogon saccharoides Trumpetcreeper\*\*
Campsis radicans

Fescue, tall Festuca arundinacea Vaseygrass Paspalum urvillei

\*Control at the higher rates.

This product may be tank-mixed with Oust. If tank-mixed, use no more than 1 to 2 pints per acre of this product with 1 to 2 ounces of Oust per acre.

Use the lower rates of both mixtures to control annual weeds below 6 inches in height (or runner length in annual vines) that are listed in the "WEEDS CONTROLLED" section of this booklet and the Oust label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages.

Use the higher rates of this mixture to provide partial control of the following perennial weeds. Use the lower rates for suppression of growth.

Bahiagrass Paspalum notatum Johnsongrass\* Sorghum halepense

Bluestem, silver Andropogon saccharoides Poorjoe\*\*
Diodia teres

Broomsedge Andropogon virginicus

Trumpetcreeper\*
Campus radicans

Dock, curly Rumex crispus Vaseygrass Paspalum urvillei

Dogfennel Eupatorium capilliforium Vervain, blue Verbena hastata

Fescue, tall festuca arundinacea

\*Suppression at higher rates only.

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

<sup>\*\*</sup>Suppression at higher rates only.

<sup>\*\*</sup>Control at the higher rates.

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

## Cool Season Turf Growth Regulation

When applied as directed, this product will suppress growth and seedhead development of listed turf species in industrial sites.

This product is recommended for management of coarse turf on roadside rights-of-way or other industrial areas. Do not use on high-quality turf or other areas where some turf color changes cannot be tolerated. Slight turf discoloration may occur but turf will regreen and regrow under most conditions as effects of this product wear off.

Apply 4 to 6 fluid ounces of this product per acre alone or in a recommended tank mixture. Spray volumes of 10 to 40 gallons per acre as recommended.

When using this product, mix 2 quarts of a nonionic surfactant per 100 gallons of spray solution.

This product can be used for growth and seedhead suppression of:

#### Tall Fescue Smooth Brome

For best results, apply this product in a recommended tank mixture to actively growing turfgrasses after greenup in the spring of the year. For suppression of seedheads, applications must be made before boot-to-seedhead stage of development. Applications made from seedhead emergence until maturity may result in turf discoloration or injury.

After mowing or removal of seedheads, this product in a recommended tank mixture may also be used to suppress the growth of certain turfgrasses. Allow turf to recover from stress caused by heat, drought or mowing before making applications. Applications made to turf under stress may increase the potential for discoloration or injury.

#### **ANNUAL GRASSES**

For growth suppression of some annual grasses such as annual ryegrass, wild barley and wild oats, apply 3 to 4 fluid ounces of this product in 10 to 40

gallons of spray solution per acre. Applications should be made when annual grasses are actively growing and before the seedheads are in boot stage of development. Treatments made after seedhead emergence may cause injury to the desired grasses.

#### Tank Mixtures

For the following tank mixtures, consult each product label for weeds controlled and the correct stage of application. Do not treat turf under stress.

#### Tank mixtures plus 2,4-D Amine

For additional weed control benefits, up to 1 pound a.l. per acre of 2,4-D amine may be added to the following tank mixtures. Consult the label for 2,4-D amine for weeds controlled.

#### TALL FESCUE

#### Glyfos X-TRA plus Telar<sup>TM</sup>

For suppression of tall fescue growth and seedheads, and control or partial control of some annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. Use up to 0.5 ounce of Telar per acre.

This tank mixture can also be applied after moving or removal of tall fescue seedheads for turf growth suppression. Make only one of the above applications per growing season.

#### Glyfos X-TRA plus Oust

for suppression of tall fescue growth and seedheads, and control or partial control of some annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. Use up to 0.25 ounce of Oust per acre.

#### Glyfos X-TRA plus Escort™

This tank mixture can be applied after mowing or removal of tall fescue seedheads for turf growth suppression and control or partial control of some annual weeds. Use up to 1/3 ounce of Escort per acre.

NOTE: This product is not registered for use with Escort in California.

#### SMOOTH BROME

#### Glyfos X-TRA plus Oust

For suppression of smooth brome growth and seedheads and control or

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partial control of some annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. Use up to 0.25 ounce of Oust per acre.

# Bahiagrass Seedhead and Vegetative Suppression

When applied as directed in the indicated noncrop areas (roadsides, airports, golf course roughs, and plant sites), this product will provide significant inhibition of seedhead emergence and will suppress vegetative growth for a period of approximately 45 days with single applications and approximately 120 days with sequential applications.

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

Sequential applications of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume may be made at approximately 45 day intervals to extend the period of seedhead and vegetative growth suppression. For continued seedhead suppression, sequential applications must be made prior to seedhead emergence. Apply no more than 2 sequential applications per year. As a first sequential application, apply 4 fluid ounces of this product per acre plus nonionic surfactant. A second sequential application of 2 to 4 fluid ounces per acre plus nonionic surfactant may be made approximately 45 days after the last application.

A tank mixture of this product plus Oust may be applied only on roadside for seedhead inhibition and vegetative suppression. Apply 6 fluid ounces per acre of this product plus 0.25 ounce per acre of Oust, plus 0.5 to 1 percent nomonic surfactant by total spray volume 1 to 2 weeks following initial spring moving. When using this product plus Oust for suppression of bahiagrass, make only 1 application per year.

# ANNUAL WEEDS RATE TABLE

Water carrier volumes of 3 to 10 gallons per acre for ground applications and 3 to 5 gallons per acre for aerial applications are recommended.

Apply to actively growing annual weeds.

Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

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

For those rates less than 48 fluid ounces per acre, this product may be used up to 48 fluid ounces per acre where heavy weed densities exist.

Refer to the following tables for location of the regions listed in the annual weed rate charts below.

#### Geographic Location Tables

#### **NORTHERN REGIONS** (Entire state unless specified)

Connecticut

Illinois

(North of 170)

Indian lowa

(North of Highway 50)

(Northeast Corner, East of Highway 77, North of 1-70)

Kansas Maine

Massachusetts

Michigan

Minnesota

Missouri

Nebraska

(North of 1-70) (East of I-28)

(East of I-B3)

(East of 1-83)

New Hampshire

New Jersey

New York

North Dakota

Otwo

Pennsylvania Rhode Island

South Dakota

Vermont

Wisconsin

#### SOUTHERN REGIONS

(Entire state unless specified)

Alabama Arkansas Delaware Florida Georgia

Illinois (South of I-70)

Indiana (South of Highway 50) Kansas

(Southeast Corner, South of 1-70 and

East of Highway 77)

Kentucky Louisiana Maryland

Mississippi Missouri

(South of I-70)

North Carolina Oklahoma

(East of 1-35)

South Carolina Tennessee

Texas

(East of I-35)

Verginia West Virginia

\* Also Refers to Use in: Hawaii

Puerto Rico

## **WESTERN REGIONS**

(Entire state unless specified)

Connecticut Alaska Arizona California Colorado Idaho Kansas

(West of highway 77)

Montana

Nebraska (West of I-28)

Nevada New Mexico

North Dakota (West of 1-83)

Oklahoma	(West of I-35)
Oregon	` '
South Dakota	(West of L83)
Texas	(West of I-35)
Utah	,
Washington	
Wyoming	

Annua	l Wee	de Rate	Table	North	and	South	Regions	

	Regional	Rate - Fluid Ounces per Acre					
WEED SPECIES	Differential (if applicable)	12	16	24 num He	32	40	48
Annoda, spurred			1	2.	3	5	8
Barley			18	18 +			-
Barnyardgrass	South	•	3.	5.	7	9.	12
	North			6	12"	-	
Bittercress			12	20		-	
Bluegrass, annual			10	-	-	-	-
Brassica, fivehook				-	6		
Brome, downy		6"		-			
Brome, japanese			6		24		
Browntop panicum	n		6	8.	12		12
Burcucumber				6	12	-	
Buttercup		-	12	20			
Carolina foxtail			20		-		-
Carolina geranium		-			41		9.
Carpetweed		-		6	12		-
Cheat			6	20.			
Chervil		-	20				-
Chickweed			12	18			
Cocklebur			12	18	24		
Copperleaf, hopho	rnbeam		1	2.	3.	4	6
Copperleaf, Virgin	ia		1	3.	3.	4"	6
Corn		-	12	20.		-	
Corn speedwell		-	12		-	-	-
							7

							72
WEED SPECIES	Regional Differential (if applicable)	12	Rate - Fl 16 Maxim	24	32	40	48
Crabgrass			12	18			
Cutleaf, evening p	rimens	,			3	•	6
Dwarfdandelion	7 H H O 3C	Ċ	20.				
Eastern mannagra			81	12			
Eclipta	131		4	8′	12		
-	South		4	6	8		
Fall panicum		•	•	-	-	12	24
Falsedandelion	North	-	6	12.	18	•	٠
		-	20	-	•	•	•
Falseflax, small se	ed		12	•			-
Fiddleneck		-			6	•	12
Field pennycress			6	121	•	•	-
Filaree		•		36	-	-	12
Fleabane, annual		-	6	20	-		-
Fleabane, hairy		•	6	-	-	•	•
(Conyza bonarie	nsis)		3.		101		
Fleabane, rough Florida, pusley			,	6	12 12		•
Fiorida, pusiey Foxtail	South		B*	12.	201	•	-
rextan	North	18	181+	12	20	•	٠
C !alasa		10	6	-	•	-	•
Goatgrass, jointer Goosegrass		-	3.	5	8	•	18
Grain sorghum (n	nila)		6.	- 3 - 12	20	-	
Groundsel, comm	,	Ī	6			-	
Hemp sesbania		Ĺ		2.	4.	6	Β.
Henbit					6		20
Horseweed/Mare	stail South	-		12	30.	•	20
Conyza canader		-	6	12	18		
itchgrass	·3/3) 14VIII		6	12.	18		
Jimsonweed		•			6	•	12
jiinsunweeu Johnsongrass, see	dling South	-	-	18		•	-
juniisongrass, see	North	•	12	18		-	-
Junglerice	HOLL		3"	5	7	9.	12
lankistics		-	3	J	,	7	12

 $\omega$ 

Knotweed			3	8	12	-	20
Kochia'		-	36	12"		-	
Lambsquarters			6	8.	12"	-	201
Little barley		-	20				
London rocket		-	6				
Mayweed				2.	6	12	18
Morning glory		•	-	3.	4	-	6
(Ipomoea spp )							
Mustard, blue		6	-	-			-
Mustard, tansy		6	12"	201	•	-	-
Mustard, tumble		6	-		-	-	
Mustard, wild		6	12"	18"	-		-
Nightshade, black			6	12"		-	•
Nightshade, hairy		-	6.	12			-
Oats				6	20	-	
Pigweed			12"	18	24		-
Plains / Tickseed core	eopsis		5.	12	18		-
Prickly lettuce		-	6"	12	50.		
Purslane			-		6	-	12
Ragweed, common	South	-	41	6"	8.	-	11
	North	-	6.	12	18	-	
Ragweed, giant		-		4	6		-
Red rice		-	•		41		
Russian thistle			-		6		
Rye	South		6	20	60	-	-
	North		18	18 •		•	-
Ryegrass		•	•	-	6		7.
Sandbur, field		12"	-	•		-	-
Shattercane		-	12	181	-		
Shepherdis-purse			6-	12	•	-	
Sicklepod			-	2.	4		8.
Signalgrass, broadlea	f		3.	5	7	9.	12
Smartweed, ladysthu	mb	-	4	6	8	-	12
Smartweed, Pennsylv	/ania	-	41	6	8.	-	12

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							74
	Regional		Rate · F	uid Ou	nces pe	r Acre	
WEED SPECIES	Differential	12	16	24	32	40	48
	(if applicable)		Maxim	um He	ight/Le	ngth	
Sowthistle, annual				_	6.		12
Spanishneedles					8	-	18
Speedwell, purslan	e	-	12	_	-		-
Sprangletop		-	6.	12	20		
Spurge, prostrate			6	12	20.	-	
Spurge, spotted			6	12	20		-
Sporry, umbrella		6		-	-	-	-
Stinkgrass		12	-	-	-	-	-
Sunflower		-	12"	18	-		-
Teaweed / Prickly	sida		1	2	3.	4	6
Texas panicum			6	8	121	-	24"
Velvetleaf	South	•	2.	3.	4	5	8-
	North		3	6	12	-	-
Virginia pepperwe	€d		18	-	•	-	-
Waterhemp		-		6	12"	-	
Wheat	South	-	6	30	-	-	-
	North	-	18 •	18 •	-	-	-
Wheat (overwinter	red)	-	6"	18	-	-	•
Wild oats		*	12"	•	-		•
Witchgrass		-	12	-		-	-
Woolly cupgrass		-	6	12	-		
Yellow rocket				12	20		
"Do not treat koch	ua in the button	stage	ē.				

Annual	Weeds Ra	ate Table, V	West Region

Rate - Fluid Ounces per A					
WEED SPECIES	12	16 num Herj	24	37	48
Barley	12				
Barnyardgrass	6	-		-	

1		,		•		
bluegrass, bulbous		۰		,		
Brome, downy '	· <b>.</b>		•			
Buttercup		17		,		
Cheat		9				
Chickweed	•	9	1			
Cocklebur		77				
Corn	•	•				
Crabgrass	٠	12.		,		
Dwarfdandelion	•	13	•			
Fall panicum	٠	73				
Falseflax, smallseed		17.				
Field pennycress	•	•				
Filaree	•	٠			15.	
Fleabane, hairy	•	9				
(Conyra bonariensis)						
Florida pusley	•	•		12		
Foxtail		8 fl. o.r. F	o1. For up to	<u>:</u> -		-(
Goatgrass, jointed		•				<del> </del>
Groundsel, common	•	<b>`</b>	٠	,	,	
Henbit	•	. 9	•	,	,	
Horseweed / Marestail	٠	.9	٠		,	
(Conyza canadensis)						
Johnsongrass, seedling	•	17.	•	,		
Lambsquarters	٠	.9	•	•	,	
London rocket	•	· <b>9</b>	•	•		
Morning glory (Ipomoes spp.)		۲,	•	•		
Mustard, blue	.0	٠	٠	•	•	
Mustard, tansy	Ģ	•	,	٠		
Mustard, tumble	.0	٠	1	•	,	
Mustard, wild	•	٠	٠	٠		
Pigweed	•	17.	٠	٠	,	
Rye	15	•	٠	•		
Ryegrass, Italian	٠	· <b>9</b>	•			

						76
WEED SPECIES	Regional Differential (If applicable)	12	16	i <b>d Ounces</b> 24 32 m Height <sub>/</sub>	40	48
Sandbur, field		12	-			
Shattercane		12	-	-		
Shepherdis purse			6	-	-	
Sowthistle, annual			6			-
Spurge, annual			6.	-	•	-
Stinkgrass		12			-	-
Texas panicum		-	12	-		
Wheat		18	-			-
Wild oats			12		-	-
Witchgrass			12"	-		-

'For control of Downy brome in no-till systems, use 16 fluid ounces per acre.

## Annual Weeds - Water Carrier Volumes of 10 to 40 Gallons per Acre

Apply 1 to 1.5 quarts of this product per acre. Use 1 quart per acre if weeds are less than 6 inches tall and 1.5 quarts per acre if weeds are over 6 inches tall.

These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications.

## Annual Weeds - Tank Mixtures with 2,4-D or Banvel

12 to 16 fluid ounces of this product plus 0.25 pound ai. of Banvel or 0.5 pound ai. of 2,4 Diper acre will control the following weeds with maximum height or length indicated: 6" - prickly lettuce, marestail / horseweed (Conyza canadensis), morning glory (Ipomoea spp.), kochia (Banvel only); 12" - cocklebur, tambsquarters, pigweed, Russian thistle.

16 fluid ounces of this product plus 0.5 pound a.i. of 2.4-D per acre will control the following weeds when they are the maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and

velvet leaf.

12 fluid ounces of this product plus 0.25 pound a.i. of Banvel or 0.5 pound a.i. of 2,4-D per acre will control foxtail up to 18".

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if Banvel Is applied within 45 days of planting.

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

## PERENNIAL WEEDS RATE TABLE

Apply to actively growing perennial weeds.

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

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

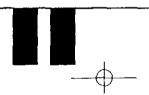
Unless otherwise stated, allow 7 or more days after application before utlage.

Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.

For hand-held sprayers, prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table.

Spray Solution

Desired		Amount of Glyfos X-TRA						
Volume	75%	1%	1%%	2%	5%	10%		
1 Gal	'n oz	1% oz	2 oz	2% oz	6% oz	13 oz		
25 Gal	1 pt	1 qt	1¼ qt	2 qt	5 qt	10 qt		
100 Gal	2 qt	1 gal	1% gal	2 gal	5 gal	10 gal		
2 tablespoo	วกร = 1 กินเ	d ounce						



			78
Weeds Species	Rate (QT/A)	Water (GPA)	Hand-Held% Solution
Alfalfa	1	3 - 10	2%
alfalfa to regr Applications :	ow to a height of a	6 to 8 inches or m with deep tillage	utting in the fall. Allow iore prior to treatment, at least 7 days after treat
Alligatorweed	1 4	3 - 20	1.5%
	Partial control. Appartial control Control Appartial Control Control Appartial Control		the plants are in bloom, ontrol.
Anise (fennel)			1.2%
			Optimum results are Ill-bloom stage of growth
Bahvagrass	3-5	3 - 20	2%
Comments:	Apply when most	plants have reache	d the early head stage.
Bentgrass	1.5	10 - 20	2%
applications of fall application prior to treat	only. Ensure entire n. Bentgrass shoul	crown area has red have at least 3 in oided. Tillage 7 to	ction areas. For ground estimed growth prior to a niches of growth. Tillage o 10 days after application
Bermudagras	ıs 3-5	3 - 20	2%
tial control, a	pply 3 quarts per seedheads are pre	acre. Treat when	roduct per acre. For par- bermudagrass is actively imay be necessary to
Bermudagras (knotgrass)	ss, water 1.5	5 - 10	2%

Comments: Apply 1.5 quarts of this product in 5 to 10 gallons of water per acre. Apply when water bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field. Fall applications

only: Apply 1 quart of this product in 5 to 10 gallons of water per acre. Fallow fields should be talled prior to application. Apply prior to frost on water bermudagrass that is 12 o 18 inches in length. This product is not registered in California for use on water bermudagrass.

Bindweed, field

0.5 - 5

2%

Comments: Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.

3 - 20

For control, apply 4 to 5 quarts of this product per acre west of the Mississippi River and 3 to 4 quarts east of the Mississippi River. Apply when weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost. Also for control, apply 2 quarts of this product plus 0.5 pound a.t. of Banvel in 10 to 20 gallons of water per acre. Do not apply by air. For suppression on irrigated agricultural land, apply 1 to 2 quarts of this product plus 1 pound a.t. 2.4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.

For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

In California only, apply 1 to 5 quarts of this product per acre, Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on Irrigated land where annual tillage is performed, apply 1 quart of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has a reached a length of 12 inches or greater. Allow a maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.

Bluegrass, Kentucky

1 - 2

2%

Comments: Apply 2 quarts of this product in 10 to 40 gallons of water

79

Og

7/00

Weeds Rate Water Hand-Held's Species (QT/A) (GPA) Solution

Bluegrass, Kentucky (continued)

per acre when most plants have reached boot to-early seedhead development. For partial control in pasture or hay crop renovation, apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Blueweed, Texas

1 - 2 3 - 40 2%

Comments: Apply 4 to 5 quarts of this product per acre west of the Mississippi River and 3 to 4 quarts per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall, Fall treatments must be applied before a killing frost.

Brackfern 3 - 4 3 - 40 1 - 1.5%

Comments: Apply to fully expanded fronds which are least 18 inches long.

Bromegrass, smooth

1 - 2 3 - 40 29

Comments: Apply 2 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedlead stage of development. For partial control in pasture or hay crop renovation, apply to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Bursage, woolly-leaf

See comments

7%

Comments: For control, apply 2 quarts of this product plus 1 pint of Banvel per acre. For partial control, apply 1 quart of this product plus 1 pint of Banvel 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.

3 - 20

Canarygrass, reed 2 - 3 3 - 40 2% Comments: For best results, apply when most plants have reached the boot-to-head stage of growth. Cattail 3 - 5 3 - 40 2% Comments: Apply when most plants have reached the early head stage. Clover; red, while 3.5 3 - 20 2% Comments: Apply when most plants have reached the early bud stage. 3 - 5 10 - 40 2% Cogongrass Comments: Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control, Dallusgrass 3-5 3 - 20 2% Comments: Apply when most plants have reached the early head stage. 3 - 40 Dandelion 3 - 5 Comments: Apply when most plants have reached the early bud stage. Also for control, apply 16 fluid ounces of this product plus 0.5 pound air. 2,4-D in 3 to 10 gallons of water per acre. 3 - 5 3 - 20 2% Dock, curty Comments: Apply when most plants have reached the early bud stage of growth. Also for control, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre. Dogbane, hemp 3 - 40 2% Comments: Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to

regrow to a mature stage prior to treatment. For best results, apply in late

81

summer or fall.

82 7/02

82 Weeds Rate Hand-Held% Water Species (QT/A) (GPA) Solution Dogbane, hemp (continued) For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.t. of 2.4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications, Delay applications until maximum emergence of dogbane has occurred. Fescue (except tall) 3 - 20 2% Comments: Apply when most plants have reached the early head stage. 1 - 3 3 - 40 Fescue, tall Comments: Apply 3 quarts of this product per acre when most plants have reached boot-to-early seedhead stage of development. Fall applications only: Apply 1 quart of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 1 pint per acre of this product will improve long-term control and control of seedlings germinating after fall treatments or the following spring. 3 - 40 1% Guineagrass Comments: Apply when most plants have reached at least the 7-leaf stage of growth, Ensure thorough coverage when using hand-held equipment. Horsenettle 3.5 3 - 20 2% Comments: Apply when most plants have reached the early bud stage. 3 - 40 Horseradish Comments: Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall. keplant 1.5 - 2% Comments: Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control. Jerusalem artichoke

3 - 20

2%

3 - 5

Comments: Apply when most plants are in the early bud stage.

Johnsongrass 0.5 - 3

Comments: In annual cropping systems apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre. For best results, apply when most plants have reached boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank-mix with residual herbicides when using 1 quart per acre rate. For burndown of Johnsongrass, apply 1 pint of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage. Spot treatment (partial control or suppression) - Apply a 1 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Kikuyugrass

2 - 3

2%

Comments: Spray when most kikuyugrass is at least 8 inches in height (3 or 4 leaf stage of growth). Allow 3 or more days after application before

Knapweed

3 - 40

2%

Comments: Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Lantana

Comments: Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.

Comments: Apply when most plants have reached the early bud stage.

Milkweed (common)

3 - 40

3 - 40

Comments: Apply when most plants have reached the late bud to flower stage of growth.

84 Weeds Rate Water Hand-Held% (QT/A) (GPA) Solution Species MilMuhly, wirestem

1 - 2 3 - 40 2%

Comments: Use 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre or in pasture, sod or noncrop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring or prior to spring applications. Allow 3 or more days after application before tillage.

Mullein, common 3 - 5 3 - 20 2% Comments: Apply when most plants are in the early bud stage. Napiergrass 3 - 5 3 - 20 Comments: Apply when most plants are in the early head stage. Nightshade, silverleaf 3 - 10 2%

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

Nutsedge; purple, yellow 0.5 - 33 - 40 1 - 2%

Comments: Apply 3 quarts of this product per acre or apply a 1 to 2% solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may perminate after treatment. Repeat treatments will be required for long term control of ungerminated tubers. Sequential applications: 1 to 2 quarts of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3 to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3 to 5-leaf stage. Subsequent applications will be necessary for long-term control. For partial control of existing plants, apply 1 pint to 2 quarts of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and

most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants

Orchardgrass

1 - 2

3 - 40

2%

Comments: Apply 2 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height. Orchardgrass sods going to no-till corn: Apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

Pampasgrass

1.5 - 2%

Comments: Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

Paragrass

3 - 5

3 - 20

2%

Comments: Apply when most plants are in the early head stage.

Phragmites

3 - 5

10 - 40

1.2%

Comments: For partial control, for best results, treat during late summer or fall months or when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

Poison hemlock

1 - 2%

Comments: Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.

Quackgrass

1 - 3

Comments: In annual cropping systems, or in pastures and sods followed

3 - 40

85

86710.

 Weeds
 Rate
 Water
 Hand-Held%

 Species
 (QT/A)
 (GPA)
 Solution

Quackgrass (continued)

by deep tillage: Apply 1 quart of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 2 quarts of this product. Do not tank mix with residual herbicides when using 1 quart rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage, in pastures or sods, use a moldboard plow for best results. In pastures, sods or noncrop areas where deep tillage does not follow applications: Apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre when quackgrass is greater than 8 inches tall.

Redvine 0.75 - 2 5 - 10

Comments: For suppression, apply 24 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 2 quarts per acre. Apply recommended rates of 5 to 10 gallons of water per acre. Apply in late September or early October to plants which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Reed, giant - - 2%

Comments: Best results are obtained when applications are made in the late summer to fall,

Ryegrass, perennial 1 - 3 3 - 40 1%

Comments: In annual cropping systems apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product in 3 to 10 gallons of water per acre. In noncrop, or areas where annual tilage is not practiced (no-till). Apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre. For best results, apply when most plants have reached the boot to head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using 1 quart per acre rate.

Smartweed, swamp 3 - 5 3 - 40 2% Comments: Apply when most plants have reached the early bud stage of growth. Also for control, apply 16 fluid ounces of this product plus 0.5 pound all, of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. 3 - 10 Spurge, leafy Comments: For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall. Starthistle, yellow 10 - 40 Comments: Best results are obtained when applications are made during the rosette, bolting and early flower stages. Sweet potato, wild 2% Comments: Partial control. Apply to plants that are at or beyond the

2 - 3 3 - 40 2%

Comments: Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active regrowth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage, for suppression, apply 1 quart of this product, or 1 pint of this product plus 0.5 pound a.i. 2,4-D, in 3 to 10 gallons of water per acre in the late

bloom stage of growth. Repeat applications may be required.

Comments: Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, artichoke

Thistle, Canada

87

2%

Thistle, Canada (co summer or fall after a minimum of 6 in made as long as lea time of application.  Timothy  Comments: For be boot-to-head stage.  Torpedograss  Comments: For pathe seedhead stage maintain control. F  Trumpet creeper.  Comments: Partial which are at least.	er harvest, mo ches in diamet aves are suit gi . Allow 3 or in 2 - 3 est results, app of growth. 4 - 5 artial control. e of growth. R	er before treating reen and plants at nore days after ag 3 - 40 ply when most plants at 40 ply when most plants at 40 ply when most plants at 40 ply when most epeat application must be applied.	Solution  Allow rosette regrowth to general solutions can be reactively growing at the oplication before tillage.  2%  ants have reached the  2%  t plants are at or beyond simil be required to before frost.
summer or fall after a minimum of 6 inc made as long as lea time of application.  Timothy  Comments: for be boot-to-head stage  Torpedograss  Comments: for pathe seedhead stage maintain control. F  Trumpet creeper  Comments: Partial which are at least	er harvest, mo ches in diamet aves are sult gi. Allow 3 or m 2 - 3 est results, app of growth. 4 - 5 artial control. of growth. R all treatments	er before treating reen and plants at nore days after ag 3 - 40 ply when most plants at 40 ply when most plants at 40 ply when most plants at 40 ply when most epeat application must be applied.	g. Applications can be re actively growing at the optication before tillage.  2% ants have reached the 2% t plants are at or beyond s will be required to
a minimum of 6 inc made as long as lea time of application. Timothy  Comments: For be boot-to-head stage  Torpedograss  Comments: For pa the seedhead stage maintain control. F  Trumpet creeper  Comments: Partial which are at least	ches in diamet aves are suit gi. Allow 3 or n 2 - 3 est results, app of growth. 4 - 5 urtial control. of growth. R all treatments	er before treating reen and plants at nore days after ag 3 - 40 ply when most plants at 40 ply when most plants at 40 ply when most plants at 40 ply when most epeat application must be applied.	g. Applications can be re actively growing at the optication before tillage.  2% ants have reached the 2% t plants are at or beyond s will be required to
Comments: For be boot-to-head stage Torpedograss Comments: For pathe seedhead stage maintain control. F Trumpet creeper Comments: Partial which are at least	est results, app of growth. 4 - 5 artial control. of growth. R all treatments	3 - 40 Apply when most epeat application must be applied	ants have reached the  2% I plants are at or beyond s will be required to
Torpedograss Comments: For pathe seedhead stage maintain control. F Trumpet creeper Comments: Partial which are at least	of growth.  4 - 5  artial control.  of growth, R  all treatments	3 - 40 Apply when most epeat application must be applied	2% I plants are at or beyond s will be required to
Comments: For pa the seedhead stage maintain control: f Trumpet creeper Comments: Partial which are at least	artial control. of growth, R all treatments	Apply when most epeat application must be applied	t plants are at or beyond s will be required to
the seedhead stage maintain control. F Trumpet creeper Comments: Partial which are at least	of growth. R	epeat application must be applied	s will be required to
Comments: Partial which are at least	2		
which are at least		5 - 10	2%
since the last tillage killing frost	18 inches tall a	and have been gr	ber or October, to plant owing 45 to 60 days at least 1 week before a
Vaseygrass	3 - 5	3 - 20	2%
Comments: Apply	when most pl	ants are in the ear	rly head stage.
Velvetgrass	3 - 5	3 - 20	2%
Comments: Apply	when most pl	ants are in the ear	ly head stage.
Wheatgrass, weste			
	2 - 3	3 - 40	2%

## WOODY BRUSH AND TREES RATE TABLE

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

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

Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

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

Weeds Species	Rate (QT/A)	Water (GPA)	Hand-Held% Solution
Alder	3 - 4	3 - 40	1 - 1.5%
Comments:	For control		
Ash	2-5	3 - 40	1 - 2%
Comments:	Partial control		
Aspen, quak	ing 2 - 3	3 - 40	1 - 1.5%
Comments:	- ·	- 14	7
Bearmat (Be	arciover) 2 - S	3 - 40	1 - 2%
Comments:	Partial control		

			90
Weeds Species	Rate (QT/A)	Water (GPA)	Hand-Held% Solution
Beech	2 - 5	3 - 40	1 - 2%
Comments: P	artial control		
Birch	2	3 - 40	1%
Comments: F	or control		
Blackberry	3 - 4	10 - 40	1 - 1.5%

Comments: For control, Make applications after plants have reached full. leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 3/4% solution of this product. 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.

	ganoris or water		
Blackgum	2 - 5	3 - 40	1 - 2%
Comments: Fo	or control		
Bracken	2 - 5	3 - 40	1 - 2%
Comments: Fo	or control		
Broom: Frenct	ı, Scotch		
	•	-	1.5 - 2%
Comments: Fo	or control		
Buckwheat, C	sliforma		
	•	-	1 - 2%
Comments: For best result	•	Thorough coverag	e of foliage is necessary
Cascara	2 - 5	3 - 40	1 - 2%
Comments: P.	artial control		
Catsclaw		÷	1 - 1.5%

Comments: Pari	tial control		
Ceanothus	2 - 5	3 - 40	1 - 2%
Comments: Pari	tral control		
Chamise	-		1%
Comments: For best results.	control. Thoro	ugh coverage of fol	age is necessary for
Cherry: bitter, bi	lack, pin		
	2 - 3	3 - 40	1 - 1.5%
Comments: for	control	`	
Coyote brush	-		1.5 - 2%
Comments: For fully developed.	control. Apply	when at least 50%	of the new leaves are
Dogwood	2 - 5	3 - 40	1 - 2%
Comments: Part	int control		
Elderberry	2	3 - 40	1%
Comments: For	control		
Elm	2 - 5	3 - 40	1 - 2%
Comments: Pari	tial control		
Eucalyptus			2%
			pply when resprouts are application to drought-
Florida holly (Br.	azılıan Pepperu	ce)	
	2 - 5	3 - 40	1 - 2%
Comments: Par	tial control		
			9

Weeds Species	Rate (QT/A)	Water (GPA)	Hand-Held% Solution	
Sorse	2-5	3.40	1 - 2%	
Comments: Partial control	tial control			
Hazardia	       	  -	1.2%	
Comments: Par best results.	tial control. The	rough coverage o	Comments: Partial control. Thorough coverage of foliage is necessary for best results.	
Hawthorn	2.3	3 - 40	1-1.5%	
Comments: For control	. control			
Hazel	2	3 - 40	*	
Comments: For control	: control			
Hickory	2.5	3.40	1-2%	
Comments: Partial control	ual control			7
Honeysuckle	3-4	3.40	1-1.5%	
Comments: For control	. control			
Hornbeam, American 2	erkan 2 - 5	3 - 40	1 - 2%	

Comments: For control. Repeat applications may be required to maintain control.

3 - 40

Comments: Partial control

Kudzu

1 - 2%

3.40

Comments: Partial control Madrone resprouts

Locust, black

Comments: Partual control. Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring or early summer treatments.

Comments: Partial control	rual control		
Maple, red	2.4	3.40	1-15%
Comments: For control, the new leaves are fully of this product per acre.	r control, apply are fully develop per acre.	a 1 to 1.5% solution ed. For partial cont	Comments: For control, apply a 1 to 1.5% solution when at least 50% of the new kaves are fully developed. For partial control, apply 2 to 4 quarts of this product per acre.
Maple, sugar			1 - 1.5%
Comments: For fully developed.	r control. Apply	when at least 50%	Comments: For control. Apply when at least 50% of the new leaves are fully developed.
Monkey flower		]     	1.7%
Comments: Par best results.	rual control. The	overage of	Comments: Partial control. Thorough coverage of foliage is necessary for best results.
Monkey flower		,	1.2%
Comments: Pa best results.	rual control. The	Yough Coverage of	Comments: Partial control. Thorough coverage of Iolage is necessary for best results.
Oak; black, white	ā		
	2.4	3 - 40	1.2%
Comments: Partial control	rtial control		
Oak; post	3.4	3 - 40	1 - 1.5%
Comments: For control	r control		
Oak; northern, pin	u <sub>d</sub> .	,	1-1,5%
Comments: For fully developed.	r control. Apply	when at least 50%	Comments: For control. Apply when at least 50% of the new leaves are fully developed.
Oak, southern red	25		
	2.3	3 - 40	1-1,5%
Comments: For control	r control		

Weeds	Rate	Water	Hand-Held%
vveeas Species	(QT/A)	(GPA)	Solution
Persimmon	2 - 5	3 - 40	1 - 2%
Comments: Par	tial control		
Pine	2 - 5	3 - 40	1 - 2%
Comments: For	control		
Poison Ivy / Poi	son oak		
	4-5	3 - 40	2%
control. Fall trea	itments must be	applied before le	be required to maintain aves lose green color,
Poplar, yellow	2 - 5	3 - 40	1 - 2%
Comments: Par	tial control		
Redbud, easterr	1 2-5	3 - 40	1 - 2%
Comments: For	control		
Rose, multiflora	2	3 - 40	1%
Comments: for ration by leaf-ea		nents should be m	nade prior to leaf deterio
Russia olive	2 - 5	3 - 40	1 - 2%
Comments: Pa	rtial control		
Sage, black	•		1%
Comments: For best results.	r control. Thoro	ugh coverage of f	oliage is necessary for
Sage, white	2-5	3 - 40	1 - 2%
•			
Comments: Pa	rtial control		
Comments: Pai		<del></del>	

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Comments: For control.	Thorough coverage of foliage is necessary for
best results.	

pest results.			
Salmonberry	2	3 - 40	1%
Comments: For	control		
Salt-cedar	2 - 5	3 - 40	1 - 2%
Comments: For	control		
Sassafras	2 - 5	3 - 40	1 - 2%
Comments: Par	tial control		
Sourwood	2 - 5	3 - 40	1 - 2%
Comments: Par	tial control		
Sumac; poison,	smooth, winged 2 - 4	3 - 40	1 - 2%
Comments: Par	tial control		
Sweetgum	2 - 3	3 - 40	1 - 1.5%
Comments: for	control		
Swordiern	2 - 5	3 - 40	1 - 2%
Comments: Par	tial control		
Tallowtree, Chir	nese		1%
Comments: For best results.	r control. Thoroug	h coverage of fo	kage is necessary for
Tan oak respros	ıts		30
	r partial control. A results are obtaine		2% s that are less than 3 to ations.
Thimbleberry	2	3 - 40	1%
Comments: For	control		
			9

			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Weeds	(QT/A)	(GPA)	Mand-Held7. Solution
Tobacco, tree			1 - 2%
Comments: Partial control	teal control		
Trumpet creeper	2.3	3-40	1-15%
Comments: For control	control		
Vine maple	2.5	3.40	1.2%
Comments: Partial control	joutuoo jen.		
Virginia creeper	2-5	3 - 40	1-2%
Comments: For control	Control		!
Waxmyrde, southern 2 - 5	ithern 2 · 5	3 - 40	1-2%
Comments: Partial control	rtal control		
Willow		3.40	*
Comments: For control	footing		

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